Railway Age

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Extend Usefulness of Interlockings

SEVERAL roads have made striking economies by combining the control of two or more existing interlockings in one tower, and by extending the interlcoking zone to include the operation of passing track or junction switches within a radius of four or five miles. On at least three different roads separate remote control machines operate interlockings for railroad crossings several thousand feet from the point of control. These machines are located in the towers of interlocking built to protect other crossings and the towermen handle both plants. The switches at the ends of passing sidings and the ends of double track may likewise be controlled from the nearest tower or telegraph office, thus eliminating many times the necessity of stopping heavy trains. The Missouri Pacific has applied this idea to an entire single track division on which all passing track switches are interlocked and operated from the nearest telegraph office, every normal train movement being made by the authority of the signal indication without a written train order. The operation of intermediate sidings and the direction of train movements into and out of such sidings are all controlled remotely by operators at adjacent stations. On another road a division superintendent and the superintendent of signals are now investigating operating conditions on a busy single track division with the intention of installing remote control switches and signaling to reduce train delays. Such a system approaches the ultimate in extending the usefulness of existing forces of levermen and operators. In fact, forces can be reduced in many cases without sacrificing any of the advantages in facilitating train movements.

An Opportunity Lost

IT is reported that a successful politician called in a group of newspaper reporters on the occasion of his election to an important office to request that if they could not say anything favorable about him in their columns they at least say something. In other words, he realized that the most effective aid of a man in public office is publicity. The value of the constant repetition of a name as a means of fixing it firmly in the mind of the consuming public is the basis of advertising and large sums of money are spent annually for the one purpose of establishing the name of a product in the minds of those who are in a position to buy it. The railways have much to learn from other industries in the matter of publicity. With lines extending into every part of the land and into practically every hamlet, they have an opportunity offered few other industries, yet their "modesty" is such that it is seldom that their structures even reveal the identity of their owners, let alone carry any constructive publicity. Their stations, which offer a splendid opportunity for a display of the road's monogram, are commonly devoid of any evidences of ownership other than that which may follow the use of a road's standard colors which identify them only to the railroad man. As a result, the impression on the passer-by is merely that of a station, rather than of "the station of the A. B. & C. road." At least one road has recognized the error of this practice by inserting its initials in an attractive design at each end of the name board on the ends of every station, large and small. This road is also placing its monogram on its water tanks, roadside elevators and other structures, so that the traveler on trains, and more particularly on the intersecting highways is informed of the identity of the particular road whenever he comes on its property. If constant repetition is good advertising, other roads have much to learn in this respect.

Oil-Electric Locomotives

THE use of oil-electric locomotives can be considered as a form of electrification in which the power plant is carried on the locomotive. A record of oil-electric locomotive performance up to date indicates that it may fill a place in the motive power field better than is possible either with steam locomotives, or electric locomotives which receive power from a trolley. Excepting conditions where traffic is very heavy, and a concentration of power is necessary, the first cost and the cost of operating oil electric locomotives would apparently be less than for electric locomotives. In addition to this, the oil-electric is not restricted by the necessity of an overhead trolley. In actual practice the oil-electric has been pitted against a number of steam locomotives of about its own weight. Here it has proven that it can show much better performance than the steam locomotives at a fraction of the steam operating cost. Its inherent advantages lie in the high efficiency of the Diesel engine coupled with the characteristics of the electrical equipment which permit all of the power of the engine to be used at any locomotive speed. The same locomotive which can make a heavy switching movement at six miles an hour can also, if necessary be run at practically passenger train speed. The first cost of the oil-electric locomotive is high and most roads have an abundance of small steam locomotives, but these factors may in many cases be more than offset by the outstanding advantages of this new form of motive power.

Why Only 50 Per Cent?

THE *Railway Age* has been a pioneer in the advocacy of timber preservation and has for years given publicity to demonstrations of the value of treatment, expositions of methods and records of service. For many years its editors were encouraged in their enthusiastic support of this measure for conservation by the gradual but steady increase in the use of treated crossties. However, not so in recent years for, whereas, there continues to be an increase in the percentage of ties treated, this increase seems entirely out of proportion to the present status of the art of timber preservation. If we have any confidence what-

ever in the published statistics on this subject the economy of preservation has been demonstrated beyond any reasonable question. Obviously, there are conditions under which the expenditure for the treatment of a crosstie is not justified. But these are clearly special conditions and can represent but a very small proportion of the trackage covered in the annual tie requirements. Therefore, if the railroads find it economical to treat approximately 50 per cent of the ties used each year, why is the other 50 per cent inserted in the track without the benefit of any preservative treatment? The only reasonable answer which may be given to this question is that some railway managements are not thoroughly "sold" to the idea of wood preservation. In these cases there is urgent necessity for further sales efforts which must come largely from those officers on each road who are themselves convinced of the economy of timber preservation. They must also come from the timber preservation companies, individually and collectively. This matter is one which is too important to be neglected. To the railroads it means a reduction in their annual tie requirements and to the wood preservers it means increased business. The advantages to both interests are too important to be lost through neglect.

Enginemen, Operators and Rule 211

THE collision at Glenville, Minn., reported in another column, fortunately has no fatalities charged against it; but its lesson is important. Like the accident in England reported in the *Railway Age* of June 6, last, in which two men were killed, it illustrates the fundamental principle that in train movements *exact compliance* is the only safe attitude for any man toward any rule. The Glenville operator was to deliver an order to the engineman after the train had been stopped. Instead, he delivered it after he felt sure that the train would be stopped. That, in his mind, was the only difference; but it was the difference that led to the collision. Moreover, the operator was right in his assumption that the train would be stopped; it was stopped. He ignored or forgot that the rule required not only that the train should be stopped, but that the order should be delivered to the engineman *"at [in] the station office."* In essence the rule requires the stop for the purpose of enabling the operator more surely to inform the engineman what is required. The operator evidently had not given much thought to the reason for this rule. The fact remains that the engineman, apparently with deliberation, disregarded a fundamental rule; one that is many years older than that which the operator violated, and the vital importance of which is supposed to be fully realized even by the least educated enginemen. Various measures will be taken by railroad officers who wish to enforce the lesson of this collision. The Rock Island engineman probably suffers the severest punishment; and yet, although he acknowledged responsibility for his mistake, he no doubt has in his own mind a very plausible defense, namely, that the intent of the rules is that orders shall be delivered without stopping the train only when there is ample time to read the orders before a stop will be necessary. Requiring the use of Form 31 will be recommended by some. An amplification of the rule will, no doubt, be proposed. Not all of the rule-books have that clause of the Rock Island rule which we have quoted in italics. The standard code does not have it. More thorough lecturing on the rules as they are is, of course, an obvious duty. Who is ever satisfied that his lecturing has been satisfactorily thorough? The simple and all-inclusive prescription, however, as readers of the *Railway Age* have often been told, is to simplify and perfect the block system.

Making Suburban Service Pay Its Own Way

THE New York Public Service Commission has authorized the New York, New Haven & Hartford to increase its intrastate commutation rates in the New York zone by approximately 40 per cent and the Interstate Commerce Commission has authorized an increase of 20 per cent in these rates in interstate service. The Interstate Commerce Commission allowed a 20 per cent increase a few years ago when no increase was granted in intrastate rates—hence the lower interstate increase asked for at the present time. The company based its request for higher rates on the disparity between commutation rates in the New York zone and those allowed for similar service elsewhere on its system and on the allegation that present rates were not remunerative, considering the investment and the cost of service. Indeed the company submitted detailed figures for one month which showed a failure to earn even operating expenses. Meantime, the proportion of passengers riding on commutation tickets to the total passengers carried has been increasing, and manifestly the through service could not continue indefinitely to carry the burdens of an unremunerative commutation service. Representatives of the public affected have fought the increase as strenuously as possible, showing the great need for educational measures among them. The New Haven's service is electrified and carries its passengers into the heart of New York City. Yet, in spite of the enormous property investment which such service involves when compared with that of other railroads which operate entirely by steam and which do not enter the heart of the city, the New Haven's rates have in the past actually been considerably lower than those of some steam roads which have invested far less for the commuter's benefit than it has. In other words, the New Haven commuters are simply being directed at last to make adequate payment for advantages which they have been enjoying for some time at the expense of others. It is always unpleasant to be called upon to pay more for customary services. Yet, in the long run, as every thinking person who is familiar with the rapid transit situation in New York must admit, the primary demand is service. The difference of a few cents a day in fares is really trivial, provided the service be adequate. Yet how can the constant improvement in service to meet the demands of growing traffic be secured if the railroads are not going to have the assurance that they can expect a fair return on investments which they make for such improvement?

Excursions Are a Success

AS over a month has elapsed since the first low-fare excursion train was operated by a middle western railway, it can be said that the test period is over. What has the test shown? It has shown conclusively that the public likes low-fare excursions and that it will patronize them in sufficient numbers to make their operation profitable. It is significant and important that the excursion traffic is not decreasing as the novelty wears off, but it is holding up and even increasing. The railways that have been running excursions are so encouraged that they will continue to operate them until the end of the summer, and others which have held back are trying them out on their own lines.

The number of passengers carried on a single excursion in the middle west has been as high as 4,500. The average number is in the neighborhood of 1,000, probably a little over that figure. The lowest number of passengers car-

ried on any excursion train has been 400, so that it cannot be said that any of the trains thus far operated in the middle west have been unprofitable. One of the leaders in the operation of excursion trains has carried 7,000 passengers on the 10 trains it has run, the total gross revenue being $26,000. Such figures speak for themselves.

Thus far the tendency has been to run the excursions from smaller towns to larger cities. The trains run from the larger cities to the vacation resorts, however, have been quite as successful and there will be a larger proportion of these in the future. Distance has been only a slight factor, since the number of passengers carried on the over-night excursions for distances as great as 500 miles has been only a little less than the number carried on the shorter day runs. The chief factor to be considered in the operation of excursion trains appears to be to choose a place to which the public already wants to go, without regard to the distance, so long as it is not more than one night away. It is noteworthy that three railways are this week operating excursion trains from Chicago to Minneapolis and return.

A number of conclusions can be drawn from the results obtained in the month that excursion trains have been tried out. The first is that they bring to the railways a considerable revenue which they would not otherwise receive. It is clear that the excursion traffic is purely extra traffic since the ordinary passenger travel on the excursion days remains about the same. Second, the public has not been irrevocably enticed away from railway travel by the automobile. The cost factor has been the deterrent to a large passenger travel on the railways and with this obstacle removed the public will ride the trains. Third, the excursions will continue, with every indication of success. It will be surprising if more railways do not give the excursions a trial on their own lines.

The railways which started the revival of excursion trains were taking a long chance. It had been years since such excursions were run. The idea that the popularity of the automobile had made them undesirable was strongly entrenched. The success of the excursions which have been run seems to prove that this was not the case.

Hang Together—or Separately?

THERE is a story of an ancient monarch who, to keep himself going straight, employed a mentor to remind him every day that man is but mortal. The executives of the railways of this country could beneficially employ a man to remind each of them every morning that, as Benjamin Franklin said at the signing of the Declaration of Independence, "We must all hang together or assuredly we shall all hang separately."

Nothing has done the railways more harm than their many failures to present a united front concerning matters affecting all of them. There has been a great improvement since their officers used to enter into "gentlemen's agreements" regarding rates and rebating and break them almost before the day was over; but only too many very modern examples could be cited of cases in which they have not hung together and in consequence have got themselves hung separately.

Two things are essential to the prosperity of the railways as a whole and each of them and to the success and maintenance of private management. One of these is, that each railway shall be efficiently, economically and honestly managed by its own officers with respect to those matters which concern it alone. The other is, that there shall be good understanding and close co-operation between groups of railways and the railways as a whole as regards those matters which concern entire groups or all of them. The conduct of most of our railways with respect to those things that are the concern only of their own officers is and has been such as to make them the most efficient and economical carriers of passengers and freight in the world. They cannot be given an equal amount of credit for the way in which they have dealt with problems affecting large groups or all of them. If any evidence is needed that the tendency for them to fail to work together concerning matters that require united action is still strikingly manifested at times, it can be found in the fact that apparently the western roads will soon appear before the Interstate Commerce Commission to advocate different principles regarding the regulation of rates and the way that revenues derived from any advance in rates should be distributed.

The harm that may be done by failure to co-operate, and also the benefits that may be derived from co-operation, regarding important matters that affect all the railways cannot be better illustrated than by their experience in handling the distribution of cars. For many years every time there was a large freight business there were many thousands of violations of the car service rules in every part of the country. The result was that some railways got and held many more cars than they owned while others had less than their share, that equipment was not utilized to the best advantage, and that shortages of cars were aggravated, especially in the grain producing states in the grain moving seasons. Stimulated doubtless by the provisions of the Transportation Act authorizing the Interstate Commerce Commission, in emergencies, to take charge of the distribution of cars, the railways created a car service division with increased authority, and for some years have earnestly tried to observe car service rules and the instructions of the car service division. To this is largely attributable the great improvement that has occurred in the distribution and utilization of freight cars.

Little would be gained by citing the many examples available of cases in which failure of the railways to co-operate regarding matters of common concern have resulted in increases of expenses, reductions of rates and injurious legislation which might otherwise have been avoided. Every railway officer knows plenty of such examples. Of course, it always has been the "other fellows" that have been at fault. The impartial observer would be likely to say that the blame should be pretty equally divided.

The principal reason for these frequent failures to co-operate seems obvious. Day after day the officer of an individual railway studies and struggles with the problems of his own railway. In consequence, when questions arise that affect a group or the railways as a whole he is almost certain to think in terms of his own railway, and to have its rights, needs and particular situation uppermost in his mind. Competitive rivalries and jealousies are extremely hard to put aside. If his property is "weak" his attitude almost inevitably will be different from what it would if it was "strong." Examples are not wanting of the attitudes of railway officers changing when their roads have passed from the "weak" into the "strong" class or vice-versa. Such manifestations of the old Adam that is in all of us cannot be wholly prevented.

One fact about the railway situation in the United States cannot, however, be too often emphasized or over emphasized. This is, that all the railways are in, or hanging to, the same boat. The "weak" roads may be desperately clinging to it, while the "strong" roads are sitting in it more or less comfortably, but it does not follow that any of them can safely rock it by advocating or acting according to unsound principles because of special or temporary conditions. Weak roads do not always stay weak and strong roads do not always stay strong. There are railways which ten years ago were classed as weak that today are among the strongest properties in the country, and

others that were then classed as strong which today are in a grave state of debility. Conditions, management and financial results can and do change rapidly. Furthermore, the success or failure of private management and regulation of our railways will not be determined by whether the operating or financial results of this or that road are good. If the boat is rocked and goes down the results to all will be the same no matter who rocks it.

The management of almost every individual railway in this country can produce proofs that it is being efficiently and honestly operated; but for years neither the railways as a whole nor any large group have, for any reasonable period, earned a fair return. Why is this? It is mainly because they have not dealt as skillfully with the problems affecting all of them as with their individual problems. Their officers too often have disregarded the public sentiment that determines the regulation of all of them or carried the strong individualism required for successful management of individual properties into affairs of common concern in which it has been a decisive and destructive element.

The railroad problem in many of its most important aspects concerns all railways equally and in the same way. Its solution requires that as respects these matters the railways shall co-operate very closely. It is pre-requisite to such co-operation that there shall be frank and full conference and the compromising and harmonizing of many conflicting points of view and of apparently conflicting interests. Almost every time there is a failure to secure harmony of policy and action regarding a matter of importance there is lost to the railways as a whole a large part of the benefits that would otherwise be derived for all and each of them from their efficient management as individual properties.

Stores Officers and Public Relations

WITH the increasing number of instances where purchasing and stores officers of a railroad or of associations of railroads meet together there has been an increase in the number of talks made before them on the subject of public relations. Insofar as these talks attest to a real interest by purchasing and stores officers in public relations work they are sources of gratification, for contrary to any notions gathered from the successes achieved or claimed for public relations activities, thus far, the work is not ended but continues of importance and needs support from men in every railroad department.

But it is particularly to be observed that among the railroad departments which are engaged primarily with the physical side of the railway business the purchasing and stores department is by no means the least useful from the public relations point of view. The reason is found in the effects of impressions concerning railroad efficiency in winning or losing public favor. To the public mind efficiency on a railroad implies something to praise, inefficiency something to condemn, and a railroad is efficient or inefficient not primarily in proportion to the money it is known or believed to be making but in proportion to the appearance it presents, the thrift it exhibits, and the service it renders.

It is for the certain and powerful effect of things seen at storehouses or things said about purchasing and stores operations in forming impressions concerning the extent of this efficiency that this department invites inquiry. The scrap pile is a favorite source of information to the professional critic of railroads with which to make his colorful disclosures of railroad shortcomings. The scrap pile is part and parcel of the storehouse. So also are the lumber yards, the platforms of castings, the sheds of iron and the shelves of other wares; likewise, the records of money spent for these supplies and money saved in their reduction or repair. Yet it is upon such sights and information that public opinion of a railroad is or can be established as often and as effectively as any other. Whether the explanation lies in the fact that the public mind prefers the seen to the unseen or the familiar to the strange in forming its opinion about railroad efficiency or whether the explanation is something else, there is no denying the place of the department as a reflector of railroad efficiency and correspondingly as a force with which to reckon in efforts to improve public relations.

The knowledge of this should prove of value not alone by re-emphasizing the importance of a stores department to managements. It should prove of particular value for the message it carries to stores officers about public relations work. If recent meetings of stores officers at which talks on public relations have been made are any criterion, the remarks made have been confined principally to the usual admonitions on winning public good will and overcoming public ill will by the processes of mingling, persuasion, etc. It must not be concluded that these admonitions have lost their usefulness because with time they have become less novel, for it is improbable that railway officers will be reminded too often of the opportunity in public relations work that lies in active participation in civic affairs and of the influence of occasional remarks uttered by them in praise or defense of transportation. Neither can it be said that stores officers are not capable of doing effective work in this direction. There is no doubt but that the purchasing and stores organization can hold its own in activities of this character.

But it should impress officers active in this direction and encourage those not inclined toward or fitted for such activities that in the final analysis, the most effective way in which they can contribute to public relations work is in so conducting and supervising the work under their charge and in exhibiting their facilities and accomplishments, or broadcasting the facts about them as to reflect decisively to the credit of the railroads of which they are a part. If they are first of all efficient in their official capacities, being guided always by a broad view of the susceptibilities of the public, their positions as forces in public relations work will be surpassed only by their value as a department to the railroad. The possibilities are worth the undertaking.

Storage Supplies of Coal Lowest in Over Two Years

THE nation is confronted with the threat of a strike in the anthracite mines. There is also talk of trouble in some of the bituminous mines. It seems well worth while, therefore, to call the attention of the public to the fact that there is probably less coal in storage now than there has been at any time since January 1, 1923, when storage supplies were still depleted by the effects of the great coal strike of 1922, and that the amount in storage is still declining.

There have been since the war great fluctuations in the storage supplies of coal. According to an estimate of the United States Geological Survey there were 63 million tons of bituminous coal in storage when the Armistice was signed in November, 1918. This was as high a figure as was ever reached. On June 1, 1920, after the switch-

men's strike had for two months demoralized transportation, the amount was only 20 million tons. The railways struggled hard all the rest of the year to transport enough fuel to prevent a shortage.

On April 1, 1922, in anticipation of the great strike in the bituminous mines which began on that date, the amount stored had been built up to about the same as on Armistice day. During the five months of the coal strike three-fourths of the storage supplies were wiped out. Then for more than a year the production and transportation of coal progressed on a large scale, and on January 1, 1924, storage supplies reached 62 million tons.

During the year and nine months that have elapsed since then consumption has steadily exceeded production, and in consequence storage supplies have steadily declined. The Geological Survey reported that on June 1, 1925, there were in storage only 38 million tons of bituminous coal. We do not know exactly at what rate coal has been consumed since then, but we do know that from June 1 to September 1, 1924, consumption averaged 8,666,000 tons a week, and it is reasonable, in view of general business conditions, to assume that the weekly rate of consumption this summer has been at least as large as it was last summer. The reports of the Geological Survey show that the production of coal during the seven weeks from May 30 to July 18 averaged only 8,431,000 tons a week. This would indicate that since June 1 storage supplies have been reduced at the rate of about 235,000 tons a week, and that there are now only about 36 million tons in storage.

This is the smallest amount that ever has been in storage at any time since June 1, 1920, except during and immediately following the great coal strike of 1922; and if production and consumption should be continued at the present rates until September 1 the supply in storage on September 1 would be only about 34 million tons, or 13 million tons less than on September 1, 1924, and 22 million tons less than on September 1, 1923, and only 12 million tons more than on September 1, 1922, just before the great coal strike ended.

From a railroad traffic standpoint these statistics are encouraging. They indicate that during the next five months the railways will be called upon to transport a substantially larger amount of coal than during the corresponding months of last year. In what condition would the public find itself, however, if there should be a strike in the anthracite mines? The production of anthracite thus far this year has been about the same as last year. If, however, there should be an anthracite strike there would be a large demand for bituminous coal from those who usually burn anthracite. This would greatly increase the load upon the bituminous coal carriers. Finally, in what condition would the public find itself if there should be strikes not only in the anthracite, but also in some of the bituminous mines?

The railways can transport a great deal more bituminous coal than they are now handling. Many of them that are suffering from the smallness of total coal purchases and shipments and from the continued demoralization of the coal mining industry would heartily welcome the opportunity to haul more coal. It would be much better, however, for the railroad business in particular and business in general if coal were shipped in larger amounts in the summer months with the result that the railways would be called upon to handle less of it in the fall and winter months. Furthermore, there is a limit to the amount of coal the railways can transport, especially when it becomes necessary to move it over new routes because of coal strikes. The supplies now in storage give the public a very narrow margin of safety, and if it were wise it would begin buying and storing more coal at once.

Books and Articles of Special Interest to Railroaders

(Compiled by Elizabeth Cullen, Reference Librarian, Bureau of Railway Economics, Washington, D. C.)

Books and Pamphlets

Commerce Yearbook 1924, compiled by U. S. Bur. of For. and Dom. Commerce. "Transportation and Communication," i. e., Railroads, Motor transport, Inland waterways, Ocean shipping, Telephone, Telegraph, Radio and Aviation, p. 383-434. 719 p. Pub. by Govt. Print. Off., Washington, D. C. $1.00

Cost and Development of Commercial Aviation. A list of references compiled by Library, Bureau of Railway Economics, which includes material comparing speed, time of transit, costs of operation and maintenance, etc., of railroad-and air-services. 16 p. Issued by Library, Bureau of Railway Economics, Washington, D. C. Apply.

Digest of Briefs Filed with the Interstate Commerce Commission in I. C. C. 17,000—*Rate Structure Investigation.* Digest of 93 briefs filed. 16 p. Compiled and issued by Washington Planograph Co., Washington, D. C. Apply.

The Dust Hazard in Industry, by William E. Gibbs. Especially sections discussing explosive dusts and dust explosions. 168 p. Pub. by D. Van Nostrand, New York City. $2.00.

The Technology of Water, by Alan A. Pollitt. Water analyses, effects of impurities, water treatment. 158 p. Pub. by D. Van Nostrand, New York City. $2.00.

The Philadelphia & Columbia Railroad of 1834, by John C. Trautwine, Jr. 178 p. Illustrated. Pub. by City History Society, Philadelphia, Penna.

Periodical Articles

Rail Problems Studied on Miniature System in D. C. Home, by George H. Dacy. The "B. & O. Junior" miniature system for which the track, rolling-stock, etc., of the Baltimore & Ohio were models. Constructed by J. N. Swartzell. Washington Sunday Star Magazine section, July 26, 1925, p. 1.

The Railroad and the Farmer. An interview with Hale Holden, President of Burlington System, by Edward Hungerford. Country Gentleman, July 25, 1925, p. 13.

Railway Express Has 52 Fifty-Year Veterans, by Irving A. Guerin. New York World, July 25, 1925, [magazine section] p. 3.

Survey of the Nation's Public Utilities. Report by Committee to National Asso. of Mutual Savings Banks on investments, performance and return. Savings Bank Journal, July, 1925, p. 142-148, 208-212.

Ten Electric Locomotives Do Work of 23 Steam Engines, by W. D. Bearce. Results of electrification of a section of the Mexican Railway between Esperanze and Orizaba. Aera, July, 1925, p. 1998-2003.

Our Greatest Centenarian. An illustrated history, primarily of British railroads, but outlining expansion of railroads throughout the world. Four color-plates of earliest locomotives on British railroads. My Magazine [London, Eng.] July, 1925, p. 545-556.

In Memoriam—Warren Sanford Stone. Locomotive Engineers Journal, July, 1925, p. 485-505.

Recent Extension of Collective Bargaining—Co-operation—in the Railroad Industry, by B. M. Jewell. Application of "B. & O. Plan" to other railroads. American Federationist, July, 1925, p. 525.

"Be It Enacted," by R. S. Henry. Review of the several thousand odd laws for regulation of railways. Nation's Business, July, 1925, p. 31-32.

Letters to the Editor

[*The* RAILWAY AGE *welcomes letters from its readers and especially those containing constructive suggestions for improvements in the railway field. Short letters—about* 250 *words—are particularly appreciated. The editors do not hold themselves responsible for facts or opinions expressed.*]

Comments on a Case of Modesty

TO THE EDITOR:

Mr. Sillcox's article on the "Economics of Shopping Locomotives" in the issue of May 23, 1925, presents some very interesting information. He has ascribed the favorable showing in locomotive maintenance to just one factor—the increased mileage between shoppings. But one chapter does not make a book. Locomotive maintenance is equally, and probably more, affected by facilities, personnel and organization. In overlooking the last two points, it may be remarked that Mr. Sillcox is a most modest man.

AN INTERESTED OBSERVER.

Mechanical Division Meeting

CHICAGO, ILL.

TO THE EDITOR:

It is with a great deal of interest that I have read your editorial entitled "The Mechanical Division Meeting" published in your issue of June 20, 1925. I suspected that it might bring forth comment, and the letter from C. A. Seley, in your issue of July 18 is an excellent exemplification of a proper attitude toward a policy not unquestioned. Without doubt the attitude of those who decide the policies of the major associations, engineering and purchasing, as well as mechanical, is predicated upon the assumption that supplymen are always salesmen and that, therefore, their statements would be prejudiced.

It seems to me that all should recognize the fact that the specialists selected from the organizations of the railways to make technical reports are the same men, in class, as those who are selected by the supply manufacturers for like work. When the technical member of a railway organization postgraduates to a supply organization, he does not, in the nature of things, become less veracious or less worthy of attention. On the contrary, his value to his art should increase with the wider and more varied experience thus made possible.

After all, are not those committee members who are reporting upon the results of their work, just as much salesmen as are those who, from the outside, attempt to exploit the results of their work? Why should the one be entitled to exclusive consideration and immunity from argument manifestly not available to the other? It surely does not seem to the best interests of railway progress that this situation should continue to exist.

In the way of illustration, it is interesting to note that a committee member recently reported to one of these associations on a method for which he was responsible, in use on his railway. He stated that the method saved six per cent in fuel. Consultation of standard statistics showed that line as among the few highest, in fuel consumption, in the United States. Had not those, who were best equipped to discuss the subject been excluded, it is possible that a different conclusion might have been reached.

L. F. WILSON.
Vice-president, The Bird-Archer Company.

Advertise for Passenger Business

NEW YORK

TO THE EDITOR:

The editorial in the *Railway Age* of July 4 dealing with railroad advertising brings out an interesting point. The railroads have been loath to advertise their passenger service, generally speaking. When business is poor they frequently suspend advertising entirely, unlike the mercantile establishment which relies upon publicity even more when sales are small than when business is good.

New England railroads have been particularly delinquent in spending money to produce revenue. Despite the fact that the scenery in New England compares favorably with that of any part of the east, these roads have depended upon the hotels and the state publicity bureaus to do the advertising for the region, and the latter, having no particular interest in developing railroad traffic, may frequently stress the good motor roads available to the tourist, thereby creating automobile tourists to the exclusion of rail traffic.

As noted in your editorial, there are few round trip rates offered for excursion trips, and the excursions, without Pullmans, are not inviting to the discriminating traveler. Not only are there no round trips offered at substantial reduction to the vacationist, but the railroads' off-line offices in New York apparently are not looking for business even at straight fares. I recently called at the off-line office of a large railroad to inquire about rates for a summer trip, but the agent, upon being informed that the first part of the journey would be on a line with which his company does not work, stated that his office did not sell such transportation and referred me to the Grand Central Terminal. It would be a hardy traveler who would go to either the ticket window or the information bureau at that Terminal and expect the agent to take the time to quote fares and other data for a journey involving a number of changes from rail to boat, etc.

The result is that I shall go to a steamship line and purchase as much of the transportation from them as possible and avoid so far as possible the road which was not looking for business.

Advertising *increases* business and *creates* business. Of this, there can be absolutely no question. The best-advertised railroads are the best-patronized ones; for instance, the New York Central, Santa Fe, Great Northern and Missouri Pacific, in their respective territories. If there ever was a doubt that advertising was necessary, that doubt was dispelled in New York last year when the daily papers were put out of business by a week's strike of the pressmen. As a result of not having an advertising medium, department store sales fell off sharply, and immediately increased again when the advertising was resumed.

The Canadian National Railways, because of an aggressive advertising campaign, is building up a passenger business to the Coast. Because of its advertising in an international daily newspaper, it attracted no less a personage than Mary Pickford to ride its line from Montreal to Vancouver, with resultant free publicity to the railroad which was worth many times the cost of the advertisement.

There is money waiting for the railroads to collect among thousands of persons who have no desire to travel by motor on the crowded highways of today, and who prefer the luxury of railroad travel to that of a bus or even a private motor car. But these passengers must first be "sold" on the desire to make a trip; attractive rates must be quoted in order that they may feel they are getting a real bargain; and finally, sleeping and parlor cars must be provided to accommodate those who would rather stay

at home than travel in a day coach for more than an hour or two.

Passenger business would not have fallen off to the extent which it has in the past three years if an aggressive effort had been made to retain it. This does apply only to the trans-Continental lines but to the lines which could advertise round trips of approximately 1,000 miles in conjunction with another road, in order to offer a diversity of routes coming and going, and *at a reduced fare.*

One often rides in Pullmans, both sleepers and parlor cars, and notes that almost half the space is unsold. If that wasted space were occupied by tourists making special journeys for pleasure at one-half the straight fare, the resultant revenue would be *net* earnings, almost every cent of it.

It would be an interesting test if a railroad were to appoint a man with mercantile training in selling exclusively, with no knowledge of railroad rates, practices or policies, and give him the title of "General Sales Manager," with orders to bring back the lost passenger business. It can be done, at least in part, but it takes money to make money, and it requires advertising to produce business.

FRANKLIN SNOW.

Traffic Courses at Colleges

MADISON, WIS.

TO THE EDITOR:

I have read from time to time articles appearing in the *Railway Age* relative to the use the railroads could make of college graduates interested in transportation. I also read the article "From a College Boy" appearing on page 1076 of your May 2 issue.

I also am a "college boy," a senior at the University of Wisconsin pursuing the courses dealing with transportation as given at this institution. I am not interested in transportation from the engineering side but from the traffic side. It has always seemed to me possible to develop a course or courses with laboratory instruction involving the principles of construction, interpretation and application of the Consolidated Freight Classification and some of the class and commodity tariffs. In a course of this kind it seems to me that one laboratory section should be devoted to problems involving the application of class and commodity tariffs appertaining to the territory wherein the institution is located and another appertaining to the application of tariffs from and to other traffic territories.

The American Commerce Association and The La Salle Extension University make this a part of their courses in Traffic Management. Why cannot the colleges establish courses relative to this phase of transportation as they do for their courses in accounting, statistics, engineering, geology, etc.? Would not the railroads and commercial interests seek the colleges for men trained in this line of work if they knew such training was being given and would there not be a bigger incentive for more students to enter this field if they had a feeling that there existed some possibility of obtaining employment when they graduated? Surely the work is just as fascinating as the work required in other laboratory courses, some of which seem to fit no purpose other than to meet the requirements of a degree or to give some one a job.

If the railroads are to remain the fundamental means of transportation in this country, and I believe they are, there will always be a demand for men who know freight tariffs. Big business will admit, and so will the railroads, that they lose money every year through misquotation of rates and incorrect interpretation of classifications and rate tariffs. If the colleges can *do* for students in other fields, it is my belief that they can *do* for them in this field also.

C. R. UPHAM.

What Henry Ford Does Not Do!

CHICAGO.

TO THE EDITOR:

Your article in the *Railway Age* of February 28 regarding the management of the D. T. & I. Railroad and the resultant criticism in the March 21 issue furnishes considerable food for thought. There is, no doubt, much to criticize, but also much to extol, in the method of operation and maintenance.

Put a man in a cheerful environment at a considerate wage and he is *willing* to go beyond his stipulated task. As to putting a man on inferior work while under discipline, it would seem preferable to remain on his employer's payroll rather than on his grocer's and butcher's credit roll.

The majority of our railroads are too departmental, playing havoc with earnings and breaking down morale. Were it the principle of railroad management to co-ordinate and to insist upon the co-operation of the different departments, enormous savings would be effected. For instance:

Can you visualize Henry Ford leaving in authority a department head who prevented, for three years, the presentation of a change in method of operation to the president of the road, who finally authorized the change, with a resultant reduction in operating cost of approximately two hundred thousand dollars a year?

Or to have a change in accounting methods balked for five years, which, when finally adopted, resulted in a saving of twelve thousand dollars a year?

Or to construct at an expenditure of two and one-half million dollars two terminal yards and then classify trains for final terminal delivery and increase the operating cost at this latter terminal fifteen thousand dollars per year?

Or the practice of storing fuel exposed to the elements for a period of from three to five years and then use for locomotives, causing engine failures, increased wage, car handling, locomotive maintenance and non-productive locomotive hours?

Or to tie up locomotives, under steam, in winter weather, at stations, when they could and should be in an adjacent engine house for necessary repairs, thus reducing fuel, labor and maintenance costs, also the number of locomotives in service?

Modern locomotives are equipped with boosters and feedwater heaters, but not properly maintained, improper lubrication of valves and cylinders resulting in cut bushings, which are rebored and finally renewed; also cylinder packing must be renewed in from two to five hundred miles.

An engine house at a principal terminal is equipped with a hot water washout system, but due to faulty construction there has been no salvage of water or steam from locomotives being washed out.

These and many other glaring conditions are very evident for those who wish to see, due primarily, as before stated, to a lack of co-operation. Some of Henry Ford's far-sighted methods might prove an interesting experiment.

"PHAIRE PLAIGH."

Typical "Pan-American" Service

New Pullman Equipment for L. & N. Pan-American Trains

Limited all-Pullman service provided to New Orleans—Train schedule shortened—Individual radio head phones a feautre

DURING the past two months, the Louisville & Nashvile has been operating improved service between Cincinnati, Ohio, and New Orleans, La., on its all-Pullman, Pan-American trains. One of these trains is drawn by a three-cylinder Pacific recently constructed by the American Locomotive Company.

The Pan-American trains, Nos. 98 and 99 on the main

Interior of Parlor-Observation Car

line, and Nos. 198 and 199 on the Memphis line have been popular since their inauguration in December, 1921. With the growth of the business of these trains, however, it became apparent that added Pullman accommodations would be required to care for the long-distance passengers properly and, in order not to increase the weight of the trains, it was decided to convert them from coach-sleeping car trains to solid Pullman trains. That was done with the initial trip from Cincinnati and from New Orleans on May 11. The only coaches carried since that date are on the Memphis line between Bowling Green, Ky., and Memphis, Tenn.

The equipment of the new trains is of the most modern character, and they offer every essential facility provided by other high-class trains in the country. The consist is as follows: A combination baggage and club car between Cincinnati and New Orleans, which, in addition to the usual buffet, writing desk and magazine service, contains a men's shower bath and dressing room, with valet service; a dining car between Cincinnati and Birmingham and between Mobile and New Orleans; a standard 12-section drawing room sleeping car between Cincinnati and New Orleans; a two-compartment, one-drawing room, 10-section sleeping car between Cincinnati and New Orleans; a standard 12-section drawing room sleeping car between Cincinnati and Pensacola; a parlor car between Cincinnati and Memphis; and a combination parlor-observation car between Cincinnati and New Orleans.

The parlor-observation car contains a women's lounging room and women's shower and dressing room, a large observation parlor with movable chairs and the usual magazines, writing desk, stationery, etc. A radio receiving set is provided with which head phone are used through plugs in the baseboard, although provision is made for a loud speaker if desired. The head phones, however, are preferred as they can be used by some of the occupants of the observation parlor without disturbance to the others. The balance of this car, not taken up by the observation parlor and the rooms described, is a parlor car containing the new chairs adopted by the Pullman Company. In this car is also a ladies' maid, who renders service to any of the women on the train.

In addition to the parlor car which is operated between Cincinnati and Memphis, the train carries a dining car between Bowling Green and Memphis so that the dining car service is complete between Cincinnati and New Orleans and Cincinnati and Memphis.

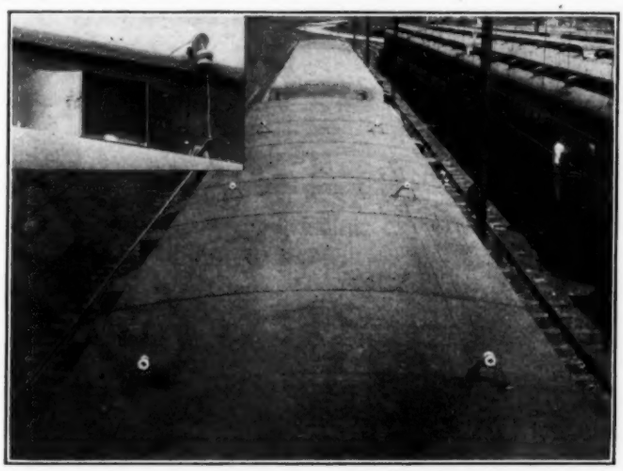
Two standard 12-section sleeping cars are added southbound at Birmingham, one to Mobile and the other to New Orleans. They are carried between the same points on the northbound trip of this train.

The train does not contain a barber shop as it is thought that this space can be utilized to better advantage since apparently little use is made of a barber on a train the run of which occupies not over twenty-five or twenty-six hours. The schedule of the new trains was shortened 55 min. southbound to New Orleans and 30 min. northbound to Cincinnati, effective May 11. On that date No. 99 left Cincinnati at 8.30 a.m., and arrived at Memphis at 9.52 p.m., and at New Orleans at 9.15 a.m. Northbound No. 98 left New Orleans at 8.20 p.m., Memphis at 7.30 a.m., and arrived at Cincinnati at 8.50 p.m.

Description of Equipment

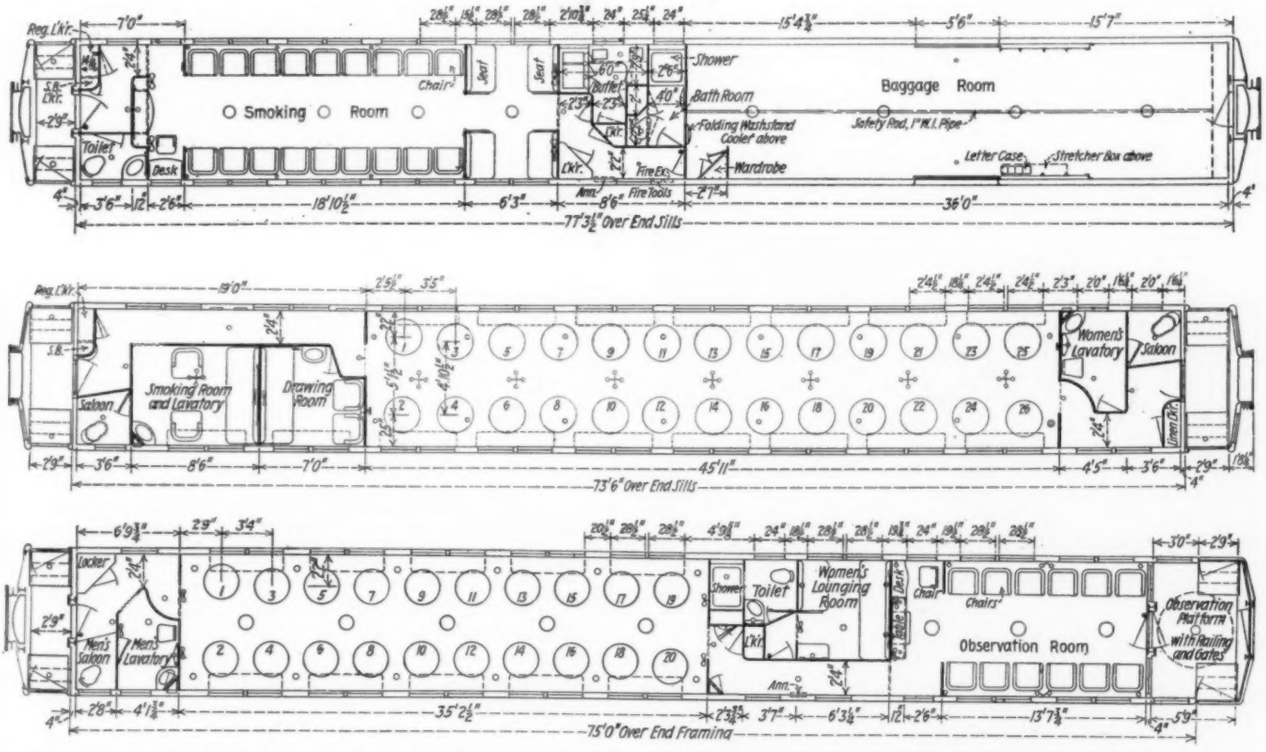
The new equipment of the Pan-American trains is of all-steel construction of the latest Pullman design, the floor plans being as shown in the drawings. The club car and observation car have wide upper deck ceilings which give them a spacious and roomy appearance. The interior of the passenger portion of the baggage-club car is finished in walnut on the walls and partitions. The deck finish and ceilings are painted in two-tone gray. Ornamentation on the walls, deck finish and ceilings, is of special design in color and gold. The lighting fixtures are of special design and have ornamental back plates, the bowls and shades being of iridescent glass.

The window curtains are faced with blue silk and have a special border design in harmonizing colors. The carpet is of Oriental pattern with a blue background. The leather upholstery is hand-buffed in two-tone blue. The bath room, finished in solid colors of light tones, is provided with a complete shower bath. The floors of the passageways, buffet and bathroom are covered with 3-in. square rubber tiles in blue and brown colors.



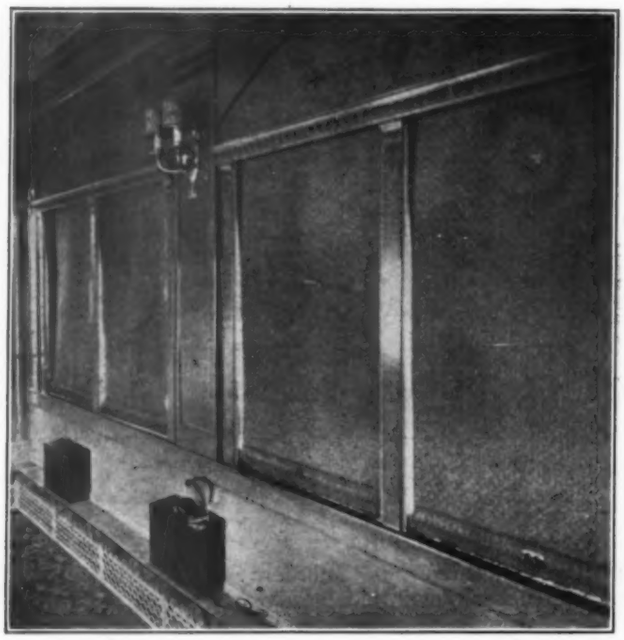
Radio Aerial of No. 8 Gage Stranded Wire Extends Once Around the Car Roof Dome—The Insert Shows the Aerial Entering the Car

Permanent headboards in the bodies of the sleeping cars give semi-privacy to the passengers in daytime. The drawing room, compartments and men's lavatory are painted and grained walnut, the balance of the cars being painted and grained mahogany. The ornamentation is in color and gold. The upholstery is of special pattern plush, fawn-green in color. The carpet has a special flowered pattern in red and green tones with a black ground. The



Top—Composite Baggage and Buffet Car; Center—Parlor Car; Bottom—Parlor-Observation Car; The Floor Plans of the 12-Section, Drawing Room, and 10-Section Drawing Room, Compartment Cars Are of the Usual Arrangement

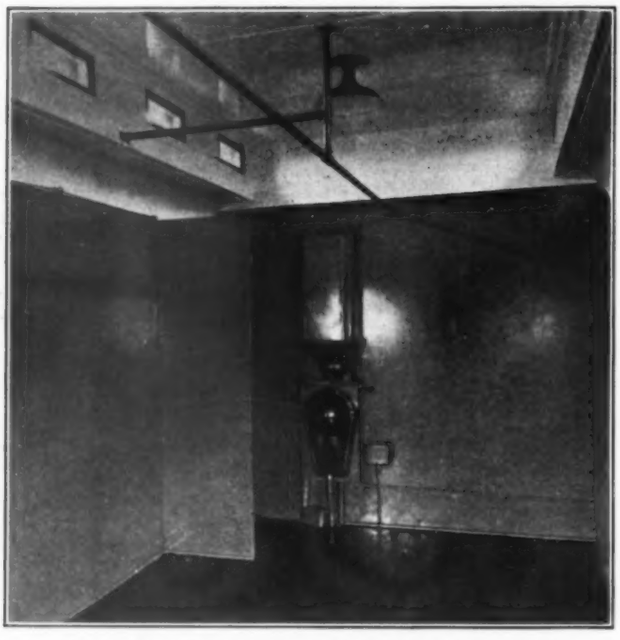
window curtains are of silk-faced pantasote having a green background with a gold diamond pattern and patterned fringe in harmonizing colors. The leather in the smoking room, of blue color, is applied by the French



View Showing the Decoration in the Parlor-Observation Car and the Individual Radio Head Phone Equipment

piped method of upholstery. Rubber tiling, brown and blue 3-in. squares and red and green 1½-in. squares is used in passageways and lavatories.

The interiors of the parlor car and the observation



Toilet Facilities, Baggage End of Club-Baggage Car

parlor car are finished in "Adam" style, the coloring, ornamentation, furniture, upholstery, curtains, lighting fixtures and carpet all being specially selected and designed. The color scheme is two tones of gray, with panels buff color and ornamentation on walls, partitions and ceilings in color and gold.

The chairs in the parlor of the observation car are overstuffed and of new design, being unusually attractive in appearance and comfortable. The chairs in the observation room are of walnut also specially designed. All chairs are covered with figured plush, sage green in color and of "Adam" pattern. The lighting fixtures are of "Adam" design with iridescent glass shades. The bracket fixtures in the observation room are of the same design, candelabra type, with ornamental mica shades. The writing desk is provided with a specially-designed fixture. The women's lounge has a sofa and seat upholstered in loose cushion styles, a table for toilet accessories and

Beautifully Decorated Parlor Car

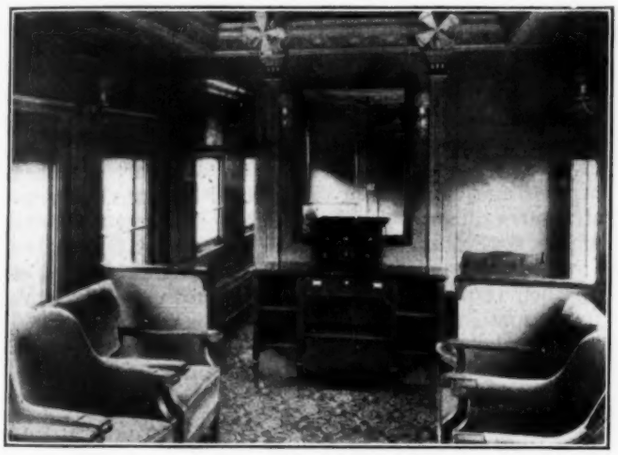
periodicals also being provided. Adjoining this room is a complete toilet room including shower bath.

Permanent Radio Equipment

The permanent installation of radio-receiving equipment on the new Pan-American train is the result of exhaustive tests by the Louisville & Nashville covering a period of many months. In considering this question, the railroad also had the benefit of tests made some years ago along similar lines, and was familiar with the difficulties to be expected in attempting radio reception under the peculiarly adverse conditions encountered in this service.

It was early recognized that because the radio set is installed on the inside of a steel car, special arrangements were necessary to overcome the shielding effect of the metal envelope. At the same time, it was recognized that on account of tunnel clearances, it would not be practicable to erect an aerial on top of the car which would be of sufficient height above the steel roof to eliminate altogether the capacity of the aerial to the ground, and that the set proper would have to strike a medium between ultra and low sensitiveness, to avoid the natural interference from signal wires, paralleling high tension circuits, static disturbances generated by revolving wheels on steel rails, and the serious interference from the generators used on cars for charging storage batteries in lighting service.

Aside from these difficulties, it was also shown by previous tests that an aerial must be provided with a non-directional effect, as otherwise signals would fade when the car passed around the numerous curves on the average railroad, and the aerial itself must in no sense be shielded by the dome of the car roof. The selection of a final aerial was based on actual tests of numerous types, and it was found that a single wire, No. 8 gage stranded, strung entirely around the dome of the roof, and clearing this dome four inches, was about the most efficient that could be secured, the aerial being tapped and run to the interior of the car with insulated wire of a little smaller gage. After this had been determined, came the question of selecting the type of instrument to be installed, and this required exhaustive investigation in actual running service. No attempt was made to test miscellaneous equipments advertised on the market, but the active radio principles as known at the present time, such as Heterodyne, Neutrodyne, Radio Frequency, Reflex and Regenerative were represented by a number of sets operating on each of these principles. This, of course, brought the manufacturers of such sets into active competition on notification by the railroad that the tests were being conducted. The manufacturers were asked to furnish sets and to have



Uni-Control, Five-Tube Radio Receiving Set in the Parlor-Observation Car

their own representatives operate such sets on an actual train movement. This request was complied with by the most representative concerns in the country and a steel coach was fitted up with antenna and the sets placed on seats in the car, being so arranged that each set would tune in on the same signals, one after another. The car was then equipped with head receivers in multiple placed in the opposite end of the car, a sufficient distance away from the sets so that the observers would be unprejudiced in their comments, not knowing at the time of reception what particular type or manufacture of set was being operated.

As a secondary precaution against bias or prejudice, representatives of other departments than that making the test were selected to pass upon the practicability and utility of the service and to report direct to the heads of their own departments.

After this arrangement had been completed, the coach was taken on the road and given a series of runs, with the result that the test became a contest of elimination of sets, simmering rapidly down by consent of the manufacturers themselves as the trial progressed. The net result was that after a few trips had been made only a small number of sets were left.

The question then became one of operation, and it was decided that the best proposition would be to install apparatus as simple in tuning as possible and allow the sets to be handled by the passengers, with certain instructions as to hours when service could be expected, and supervision of the installation at terminals. At the present time, the set installed is a uni-control proposition, five-tube radio frequency, which was found to be efficient when the aerial was energized by incoming signals of even moderate strength while on the run. It is not expected to attempt any daylight reception except after four o'clock in the afternoon.

I. C. C. Defines Its Policy on Large Union Stations

WASHINGTON, D. C.

THE Interstate Commerce Commission, in two decisions made public on July 29, in cases in which it had been asked to order railroads to construct expensive union passenger stations at Los Angeles, Calif., and Oklahoma City, Okla., held that it has no jurisdiction under the transportation act to require the construction of union passenger stations where there is no issue of undue prejudice or preference and the providing of the union station and appurtenances constitutes the major consideration and the extension, rearrangement or joint use of tracks is incidental thereto. However, under the decision of the Supreme Court of the United States of April 7, 1924, that a certificate of public convenience and necessity from the federal commission is necessary in the construction of a new interstate union station, involving a substantial and expensive extension of the tracks of carriers who have heretofore maintained separate terminals, the commission held that a means of control over major projects of this character is vested in it by paragraphs 18 to 21 of section 1 of the interstate commerce act, under which it may issue or withhold the necessary certificates.

Accordingly in the Los Angeles case the commission made the necessary findings to pave the way for an order by the California railroad commission requiring the construction of such a station in a described portion of the city, known as the Plaza site, where the California commission had ordered its erection in an order which the courts held invalid in the absence of a finding by the federal commission. It also denied the application of the Southern Pacific and the Los Angeles & Salt Lake for authority for an extension of existing lines to permit joint use of the Southern Pacific station under what is known as the Arcade plan, preferred by the railroads.

In the Oklahoma case the commission held that in determining whether public convenience and necessity exist the probable cost of the entire project must be weighed against the convenience that will inure to the public through the providing of the station and that the record does not justify the commission in lending its approval to the present plans of the complainants, the Oklahoma corporation commission and 15 citizens of Oklahoma City. The complaint was dismissed with the understanding that it may be reopened upon application of the state or the railroads, to consider such further plan or plans as may be submitted after further study and more mature consideration of the problem by the interested parties, and the railroads were urged to co-operate in working out a plan.

The commission estimated the total investment at Los Angeles, under substantially the plan presented by the California commission, at $9,500,000, but that the amount

of new money to be raised would be $5,500,000. The cost of the Oklahoma station was estimated by the complainants at $9,128,000 while the railroads said the figure was an underestimate.

The matter of the Los Angeles station has been pending before the California commission since 1916. Its order of December 6, 1921, directing the railroads to proceed with the construction of a station in the vicinity of the Plaza, after approval of plans by the commission, and with provision for the elimination of specified grade crossings, was taken to court by the railroads and resulted in the Supreme Court decision of 1924. The city of Los Angeles then filed its complaint asking the federal commission to order the construction of the station, the acquisition of the necessary land, the elimination of certain grade crossings and the construction, abandonment or joint use of tracks reasonably necessary and incidental as a part of the plan. The Southern Pacific and Los Angeles & Salt Lake then filed a finance application for authority for the construction, abandonment or joint use of tracks necessary for the joint use of the Southern Pacific station, not to be used by the Santa Fe, which desired a station for its own use on the present site.

After disposing of the jurisdictional question and discussing in detail the contentions advanced as to the merits of the plans for the Plaza union station and for separate terminals, the commission finds that public convenience and necessity permit the abandonment of service on the Southern Pacific line on Alameda street, and that the extension by the defendant railroads of their main lines "so as to reach and serve such union passenger station and terminal as they may construct and establish in a described portion of the city of Los Angeles, Calif., in accordance with a lawful order of the Railroad Commission of California, and the extension of such main lines to provide for rearrangement of their respective passenger and freight routes incidental to the convenient and proper operation of such union station and terminal," is "reasonably required in the interest of public convenience and necessity, and the expense involved therein will not impair the ability of the defendants to perform their respective duties to the public." The commission also finds that public convenience and necessity permit the abandonment or joint use of such portions of the lines as may be necessary or incidental to the station plan and that such joint use is in the public interest and practicable, "without substantially impairing the ability of the carrier or carriers owning or entitled to the enjoyment of such track or tracks to handle its or their own business." Jurisdiction was retained by the commission of the two cases for the purpose of issuing such further findings and orders and issuing such certificates as the record warrants, subsequent to the making of an order by state authority. In expressing its conclusions the commission said:

> It is clearly inferable from the record that the Santa Fe does not consider the Arcade site ample in size for the most convenient handling of the trains of all three carriers, and that so far as it is concerned operation into the Arcade station would be highly unsatisfactory. The Arcade site could be expanded by closing or deflecting important streets or by elevating the station yard. Assuming such expansion, the expenses of an Arcade station, either joint or union, would be considerably greater than for equally adequate facilities under some other plan. Adequate and convenient union passenger-terminal facilities can be provided in the Plaza area at a considerably less net new money cost than less adequate and convenient facilities under applicants' Arcade plan, and for approximately the same net new money cost as a union passenger terminal of more questionable merit on the present Arcade site.
>
> In view of the right of the state, under the qualifications noted, to determine with respect to various plans for union-terminal facilities the question of adequacy and reasonableness, without clear basis we will not override the determination of its authorities in that regard. The official commitment of the city in favor of a union station in the general area of the Plaza is also entitled to weight on the question of public convenience and necessity. If, upon investigation, it appeared that the state authorities were making unreasonable demands or placing undue burdens upon interstate carriers to the impairment of their ability to perform their duties to the public, it would clearly be our duty under *R. R. Comm.* v. *Southern Pacific Co., supra*, to refuse our consent to the consummation of the project. But where, as here, it appears that the carriers of their own necessities will in any event shortly expend considerable sums for adequate station facilities and that after fair and painstaking investigation the state authorities have selected a general site as that required by the public convenience and necessity whereon for substantially the same amounts the carriers can provide adequate and convenient union-station facilities, we think the determination of such authorities should be entitled to considerable weight. The order of the Railroad Commission of California did not specify any particular site within the general area defined nor require a particular plan to be followed. The order required that the defendants submit plans for approval and, when approved, to build in accordance therewith. The defendants at no time made any effort to comply with the order. When the general outlines of the plan are formulated, a spirit of willingness to do and cooperate on the part of all concerned—carriers, city, and state—will overcome many obstacles which now loom large. The record contains some reference to monumental stations and civic pride. The law aims to provide an adequate transportations system with adequate and convenient facilities, and not to burden that system with facilities much more than adequate, or designed less to meet the reasonable requirements of the public than demands based chiefly on aesthetic considerations or advertising value. If such elements are to be provided for in measure beyond that incidental to reasonably adequate and convenient facilities of a character appropriate to the city served, the added expense may not be forced upon the carriers.

Commissioner Hall, in an opinion signed also by Commissioner Cox, dissented from the majority report, saying that he was "not prepared to take part in selection of sites and approval or disapproval of plans for railway structures all over this broad land" and that the carriers whose application was denied "should not be restrained from bettering their service because others charged with no such responsibility devise or approve or prefer plans for a substituted service on property which the carriers must go out and acquire at cost in excess of value."

In the Oklahoma case the majority report said in part:

> This, however, should not be construed as indicating that we are of the view that the plans of the railroads to provide separate stations is in the public interest, or that it will be impossible to work out a plan to which we can lend our approval, for a union station coupled with the ultimate removal from the business district of the Rock Island's tracks and possibly a portion of the Frisco spur. In fact we are strongly of the view that if the matter is approached by all interested parties with a sincere desire to solve the problem in a way that will be for the best interests of the city, and at the same time not unduly burden the carriers financially or otherwise, a plan can be worked out that will be reasonably satisfactory to all parties unselfishly interested and at the same time be one which we can approve. In approaching the problem the railroads should keep in mind that Oklahoma City is a large and fast growing municipality; that it is the capital of a great state and a city in which all Oklahomans have a just pride; that the retention of railroad tracks especially main line tracks, in the heart of the retail district, even if elevated, is not desirable from the standpoint of a clean, progressive municipality; and that the proposed Frisco facilities will interfere with the opening of streets which eventually may be sorely needed to provide adequate avenues of approach to and departure from the retail district. The future as well as the present must be looked to, and the railroads should stand willing to make reasonable expenditures to provide needed facilities and safeguards. The state and municipal authorities should bear in mind that the city will be the principal beneficiary of a plan having for its purpose the things adverted to above, and that this being so the railroads should not be expected to bear more than a reasonable and fair share of the financial burden. In order that the costs of furnishing and operating such facilities as may be decided upon may be kept as low as possible, full benefits should be secured from any possible utilization, for private business purposes, of aerial rights over or concession areas within and around the station.

Commissioners McManamy and Esch dissented.

New Haven Authorized to Advance Commutation Fares

New York State and federal commissioners act simultaneously—Protesting passengers still active

THE Public Service Commission of New York and the Interstate Commerce Commission have simultaneously approved the higher passenger tariffs which were filed many months ago by the New York, New Haven & Hartford.

The New York State Report

The Public Service Commission of New York State on July 23 issued its decision approving increased prices for monthly and family tickets named in tariffs filed by the New York, New Haven & Hartford some months ago, making advances in the fares between New York city and all points on the main line of that road in New York State, the new rates to go into effect on August 1. The road filed its first application in September, 1922, with a tariff increasing the rates 20 per cent; but while this application was pending, a new one was presented calling for about 40 per cent increase, this change being made for the purpose of putting these rates on a parity with rates for similar services on the New Haven lines in New England. The new tariff has been suspended repeatedly while the commission heard protests from passengers and municipalities. These protestants are now endeavoring to prevent the new tariff from going into effect on August 1.

Justice Taylor of the Supreme Court in White Plains, N. Y., on July 30, issued an order to the railroad to show cause by July 31 why it should not be enjoined against applying the new rates on August 1, the date fixed—or, if not, why, at least, the increase should not be receipted for by the company and impounded pending legal proceedings.

The commission approved these rates by a vote of three to two, Commissioners Lunn and Van Voorhis dissenting. This dissent was based on the ground that the Interstate Commerce Commission had not acted on a similar application covering interstate commutation rates to and from New York City; but the federal body issued a decision, on the same day that the New York decision appeared, granting a 20 per cent increase which, it is said, has the effect of putting the interstate and intrastate rates on a parity.

The following table shows the present rates and the amount of the increases from principal stations:

	Distance, miles	Old fare	New fare	Increase per cent
Sixty-Ride Commutation Ticket				
Between New York and:				
Mount Vernon	14	$7.43	$10.62	43.0
New Rochelle	17	8.42	11.57	37.4
Rye	24	10.56	14.90	40.7
Port Chester	26	10.89	15.22	39.8
Fifty-Trip Family Tickets				
Mount Vernon	14	$13.75	$18.15	32.0
New Rochelle	17	15.95	21.89	37.2
Rye	24	22.55	31.79	41.0
Port Chester	26	23.93	33.86	41.5

The monthly rates are considerably higher than those for similar distances on other roads leading to New York, except the rates on the Pennsylvania to and from the Pennsylvania Station, Seventh avenue, New York.

The New York Commission accepts data presented by the railroad showing that 42.65 per cent increase in these rates would be necessary to cover the actual cost of the suburban passenger service and a reasonable rate of return on the value of the property. Under the new tariffs, the average rate, taking all the stations between New York and Portchester, 26 miles, will be 1.1422 cents; the single trip fare being 3.6 cents per mile. The railroad company, besides claiming that the present rates are below cost, also showed that there was an excessive difference between the rates in New York State and those on its lines in other states.

Increase Between New York and Connecticut

An increase of 20 per cent in the commutation fares of the New York, New Haven & Hartford between points in Connecticut and New York city was authorized by the Interstate Commerce Commission in a decision made public on July 23, after the new rates had been suspended, first by the commission and then voluntarily by the railroad, until August 1. The changes are intended to place the rates upon the same basis as that now in force on the New Haven system, interstate, between Massachusetts, Rhode Island and Connecticut and intrastate within those states, and also on the same basis as applicable interstate and intrastate generally over the lines in New England.

The report is by Division 4, Commissioners Meyer, Eastman and Campbell. It says, in part:

"Respondent's average revenue per mile for commutation travel in 1910 was .5802 cents and in 1922 .8343 cents. The average revenue per mile in the territory here in question based on commutation tickets sold in 1922 was .7152 cents. Under the proposed increased fares this average revenue would become .8586 cents. The average local revenue per mile was 2.009 cents in 1910, and 3.6075 cents in 1922. The local fare has been increased approximately 80 per cent since 1910, while the commutation fare has been increased about 43.8 per cent. To preserve the 1910 relationship between the commutation and local fares the former would have to be increased 24.87 per cent instead of 20 per cent. These computations being based on commutation passenger miles as represented by ticket sales, the average revenue per mile actually traveled would be increased to whatever extent the commuter failed to make full use of his ticket.

"Respondent asserts that at the outset commuters regularly traveling to and from their places of employment constituted but a small part of those using the respective railroads and therefore it was reasonable to assume that in establishing the original bases of fares little or no consideration was given to the possibility of the development of commutation traffic to such an extent as to become a substantial portion of the entire passenger traffic and a burden on the regular or standard traffic, or that there would be other avenues of transportation established especially affecting short haul traffic which would materially reduce the volume of regular or standard traffic. Unquestionably the large increase in respondent's

commutation traffic has diluted the passenger traffic revenue as a whole and has lessened the margin between the revenues and expenses of the passenger service."

The New Rates

The report gives a list of old and new rates which shows, in part, the following:

	Miles	Present fare	Proposed fare	Average cents per ride	Amount of increase
Greenwich	28.1	$13.47	$16.17	26.95	$2.70
Stamford	33.1	14.26	17.12	28.53	2.86
Noroton	36.5	14.86	17.84	29.73	2.98
South Norwalk	41.0	16.50	19.80	33	3.30
Greens Farms	47.2	18.75	22.50	37.5	3.75
Bridgeport	55.6	22.18	26.62	44.36	4.44
Devon	60.7	24.10	28.92	48.2	4.82
Milford	63.3	25.22	30.27	50.45	5.05
New Haven	72.3	29.04	34.85	58.08	5.81
New Canaan	40.9	16.37	19.65	32.75	3.28
Branchville	54.0	21.52	25.83	43.05	4.31
Ridgefield	57.7	23.04	27.65	46.08	4.61
Danbury	64.8	25.88	31.06	51.76	5.18

Return on Valuation

On the claim of the carrier that it is not earning a fair return on its property, as contemplated by the Transportation Act, the report says: "The company's property investment as of June 30, 1915, is shown as $385,875,019 and the tentative valuation as $458,181,990. The former includes amounts for the proportionate use of the Boston and New York passenger terminals, which are not owned by respondent, for materials and supplies and for working cash, while the latter includes amounts covering those items and also non-carrier property. Based upon these figures respondent shows a rate of return on investment of 3.44 per cent in 1923 and 2.97 per cent on the tentative valuation for that year. Based upon respondent's annual reports the rate of return on book value of investment in road and equipment, cash and material and supplies on hand, were 0.2 per cent in 1921, 3.2 per cent in 1922, 3.3 per cent in 1923, and 4.8 per cent in 1924. Our tentative valuation of respondent's property indicates a greater value than respondent's book value. Respondent estimates that the increased revenue which would be derived from the proposed increased fares here considered would amount to about $200,000 per year.

"Respondent contends it is under a disadvantage because its passenger traffic as compared with its freight traffic comprises a much greater proportion of the whole than is the case with the other carriers in the eastern group. In 1920 its freight traffic represented 51 per cent of the total and passenger traffic 49 per cent, whereas in the eastern group excluding New England, freight traffic was 79 per cent and passenger traffic 21 per cent of the whole. This disadvantage was accentuated by the percentage increases authorized in General Order No. 28 and the general increases of 1920, whereby freight rates were increased a higher percentage than passenger fares."

A foot note to this report gives a bit of history of the Grand Central terminal: Under a contract of March 17, 1848, respondent (the New Haven) agreed to pay the New York & Harlem 14 cents per passenger (over a trackage of 12 miles) if the number of passengers did not exceed 1,000 per day. As the number of passengers increased the rate was to become lower but was not to be less than 6 cents for any number exceeding 4,000 passengers per day. In case the parties were unable to agree, arbitrators were to be called in. The companies have resorted twice to arbitration, once in 1856 and the last time in 1861. Under the arbitration award of 1861 respondent was obligated to pay for each passenger carried over the New York & Harlem 13 cents for each full price passenger and 4⅓ cents for each commuting passenger. The compensation so fixed was predicated on the existing local tariff of rates for through passengers of respondent, any change in said rates to be proportionately advanced or reduced, as the case might be. The toll rates now paid by respondent for the use of the New York & Harlem south of Woodlawn are $.20564 for regular passengers, $.1370933 for 50 and 25-trip passengers, and $.0685466 for commutation passengers.

Under an agreement made in 1907 with the New York Central respondent, in common with the New York Central, has the use, not in excess of 50 per cent of its maximum capacity, of the Grand Central Terminal for the accommodation of its traffic. The contract also provides for the use of the Mott Haven yard of the New York Central for storing and cleaning such cars of respondent as can not be stored and cleaned in the railroad terminal; also that the respondent should have the use of the New York Central's distributing system from Woodlawn to 42nd street. The agreement provides that the ownership of all the property shall be and continue to be in the New York Central Company. The net costs of operating the terminal, after deducting operating expenses, taxes and interest on bonds, etc., are apportioned to respondent on the basis of extent of the use by respondent.

Railroad Buses in Connecticut

The New York, New Haven & Hartford last week announced that four bus routes would soon be started in Connecticut to take the place of local passenger train service, as follows:

1. From Danbury over the new Housatonic Valley highway to North Canaan, 51 miles by rail.
2. From Hartford, n. w. to Winsted, 36 miles by rail.
3. From Waterbury to Middletown by way of Milldale and Meriden, 35 miles.
4. From New London to Putnam by way of Norwich, Plainfield and Danielson, about 65 miles.

The first line named is parallel to that division of the road which is traversed by passenger trains between New York and Pittsfield, Mass., and this through passenger service is to be maintained. The second route takes the place of sections of the Central New England and parts of the New Haven proper. That part of the Central New England from Pine Meadow eastward to Simsbury, 13 miles, is to be abandoned entirely.

On the railroad from Waterbury to Middletown train service was abandoned some time ago.

Details as to what trains are to be taken off have not yet been published.

P. & A.

Dedication of New Union Station at Chicago

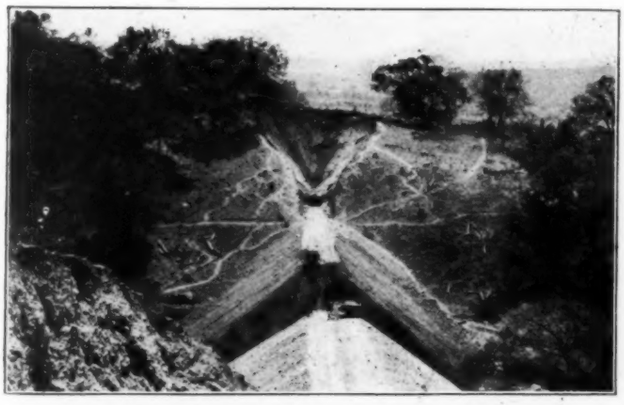
Finished Grade Through a Lava Flow

Primitive Methods Most Effective on Mexican Project

Baskets and wheel barrows are used extensively in building Southern Pacific line between Tepic and La Quemada

By E. B. Sloan
Chief Engineer, Southern Pacific of Mexico, Empalme, Sonora

ENGINEERS and contractors who visit the construction work now in progress on the Southern Pacific of Mexico between Tepic, Nayarit, and La Quemada, Jalisco,* are invariably struck by the almost entire absence of mechanical excavating equipment such as is now considered essential to the carrying on of work of such magnitude. In place of air drills, mucking machines, steam shovels and automatic dump cars handled by dinkey engines, the visitor finds the work swarming with men handling the muck with baskets, wheel barrows, cars of various capacities pushed by men or pulled by mules, and one-horse dump carts. He will also note, usually with considerable surprise, due to preconceived notions of the lack of diligence of the Mexican peon in his native haunts, that the work is usually being done at a fast trot and that the material is being moved with surprising rapidity.



Short Cut and Fill on Kilometer 250

Most American engineers and contractors haved formed the habit of thinking of work in terms of the number of mechanical units which can be placed on the job, and this habit has been the reason for unnecessarily high construction costs in many Spanish-American countries. Where wages are low and men plentiful, and supervision is handled by foremen and superintendents of sufficient experience with the class of labor to be employed to enable them to judge of its capabilities, the use of hand labor within reason, instead of modern machinery, may mean the difference between a handsome profit and bankruptcy for the contractor.

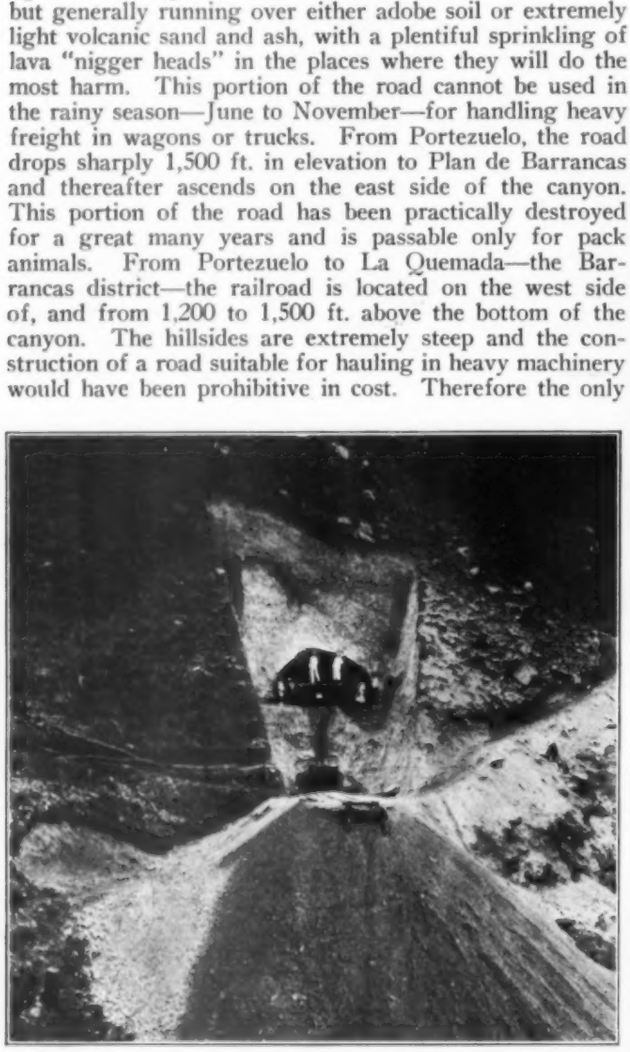
The reader should not get the impression that all the work on the line under discussion is being handled by hand labor, nor that it is the contention that hand labor, even at low wages, is more desirable or more economical than the use of machinery in every case. Steam shovels, air tools and other modern equipment have been or are being used in favorable locations, or where the element of time is a factor, but by far the greater part of the construction is being carried on under the methods to be described below:

Difficulty of Access Precludes Heavy Equipment

The relative accessibility of the work is the largest factor in determining the method to be used at each par-

* A brief, general description of this extension appeared in the *Railway Age* of January 26, 1924, page 279.

ticular location. From Tepic to Portezuelo, a distance of 135 kilometers, the line is roughly paralleled by the old Spanish road, paved with cobble stones in a few places, but generally running over either adobe soil or extremely light volcanic sand and ash, with a plentiful sprinkling of lava "nigger heads" in the places where they will do the most harm. This portion of the road cannot be used in the rainy season—June to November—for handling heavy freight in wagons or trucks. From Portezuelo, the road drops sharply 1,500 ft. in elevation to Plan de Barrancas and thereafter ascends on the east side of the canyon. This portion of the road has been practically destroyed for a great many years and is passable only for pack animals. From Portezuelo to La Quemada—the Barrancas district—the railroad is located on the west side of, and from 1,200 to 1,500 ft. above the bottom of the canyon. The hillsides are extremely steep and the construction of a road suitable for hauling in heavy machinery would have been prohibitive in cost. Therefore the only



Hand Labor Is the Predominating Feature of All the Work

machinery which is to be used on the work in the Barrancas district consists of portable compressors and ventilating and electric light plants employed in the construction of three tunnels.

As, under the terms of the agreement signed by President Obregon of the Republic of Mexico and President Titcomb of the Southern Pacific of Mexico, work on the construction of the Tepic-La Quemada extension was to be started at once, a "basket gang" was started on the work north of La Quemada on March 6, 1923. The basket is the most primitive device for handling earth, and is probably many hundreds of years old. The baskets used hold from two to four cubic feet, varying with the physical capabilities of the user, and are seldom employed for work other than side burrow. The "tarea" or task assigned to each basket man is usually four cubic meters, in earth, to be excavated in the burrow pit and placed in the fill. A good basket man will complete his task in six hours. The baskets are carried on the back and supported by a "tump line" over the forehead. The basket method of making embankments is employed only where other means are not available, as the material is not compacted and heavy subsidence may invariably be expected.

Definite Tasks Assigned for the Day's Work

The next tool in importance on the line under discussion is the wheel barrow. Where material which requires blasting is encountered, wheel barrows are almost invariably used for the handling of material from cuts to fills,

Ashlar Masonry Portal for Tunnel No. 27

until the length of haul makes their use impracticable. The task assigned the wheel barrow man varies from 120 to 225 wheel barrows, depending on the haul. The laborer does his own loading and dumping, muck being furnished in suitably broken up form by the powder man.

Trap Drift in the North End of Tunnel No. 5

After the haul becomes so long that the use of wheel barrows is impracticable, either ordinary mine cars, "Swede cars" or one-horse dump cars, are used, the amount of material handled per man being graduated by

the length of haul or the difficulty of shoveling the material. Gangs of eight men handle as much as 240 cubic meters of material per shift from trap drifts on comparatively long hauls.

The use of trap drifts was practically unknown in Mexico until the start of this work, and as a general rule, the Mexican laborer has been slow in taking up this method. However, its use is steadily increasing as more work is opened up, and it is quite probable that within a comparatively short time, trapping will have become general with the Mexican "task."

Tally Man Keeps Account of Each Laborer's Work

For the purpose of keeping account of the amount of material moved by each man or gang, a tally man is placed with each gang, or, where gangs are working opposite each other, one tally man handles two gangs. Men are assigned a distinctive number which they call out to the tally man as they dump their loads, the tally man giving them credit for each load dumped as the number is called. As the tally man is always located in full view of the work, there is practically no possibility of fraud.

Mexican Masons Take Pride in Their Work

The advantages of the task system are obvious. The men are more contented, and generally work at top speed with practically no rest until the task is completed. Especially industrious men, or those exceptionally endowed physically, can, and do, work a shift and a half or two shifts in 8 to 10 hours. The contractor knows, at the end of each day's work, approximately the amount of material moved during the day.

Drilling gangs are worked in much the same way, three men usually being assigned to a churn drill, the length of hole to be drilled depending upon the class of material. A powder man does the necessary loading and shooting. The powder men and foremen are almost the only ones on straight grading work who are not on a "tarea" basis of pay.

The manner of transporting materials and supplies from railhead to the work is also a novelty to the visitor who is not acquainted with other than typical American methods of transport. Probably 90 per cent is moved by pack train, but almost any day there may be seen on the roads burros, pack mules, two wheeled carts pulled by 2 to 10 mules or 2 to 8 oxen, the familiar American wagon harnessed to American mules, trucks—large and small, and large tractors with their trains. As there is a scarcity of water in some parts of the Barrancas district, a great deal of water for domestic purposes is handled by burrow trains in powder or gasoline cans. Practically all of the fuel for camps is packed in on mules or burros, and the vendors of meats, vegetables and other foods handle their wares in the same way.

Freight Car Loading

WASHINGTON, D. C.

LOADING of revenue freight in the week ended July 18 passed the million car mark for the first time this year. The total, 1,010,970 cars, represented an increase of 28,161 cars as compared with the loading for the week before and an increase of 80,257 cars as compared with the corresponding week of last year, although it was a decrease of 18,459 cars as compared with 1923. As compared with last year increases were shown in all districts and in all classes of commodities except grain and grain products and livestock, while as compared with 1923 increases were shown in all districts except the Eastern, Allegheny and Northwestern. However, decreases as compared with 1923 were shown in all classes of commodities except merchandise and miscellaneous. Coal loading showed an increase of 24,039 cars as compared with last year and miscellaneous freight an increase of 37,190 cars. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

REVENUE FREIGHT CAR LOADING, WEEK ENDED JULY 18, 1925

Districts	1925	1924	1923
Eastern	238,837	218,984	248,261
Allegheny	206,868	187,937	228,079
Pocahontas	51,700	42,584	43,240
Southern	142,822	127,273	129,601
Northwestern	150,862	144,286	170,270
Central Western	150,467	145,765	147,929
Southwestern	69,414	63,884	62,049
Total Western districts	370,743	353,935	380,248
Commodities			
Grain and grain products	43,956	47,548	46,270
Live stock	26,984	32,038	31,899
Coal	170,742	146,703	190,826
Coke	9,385	7,011	14,888
Forest products	68,349	64,602	75,823
Ore	62,720	57,912	84,370
Mdse., l. c. l.	253,594	236,849	240,523
Miscellaneous	375,240	338,050	344,830
Total	1,010,970	930,713	1,029,429
July 11	982,809	909,983	1,019,809
July 4	864,452	757,904	850,082
June 27	991,341	908,251	1,021,471
June 20	982,600	903,546	1,004,982
Cumulative total, 29 weeks	27,155,859	25,783,752	26,904,822

The freight car surplus for the second week in July averaged 309,560 cars, a decrease of 2,012 cars as compared with the previous week. This included 111,449 coal cars and 150,237 box cars.

The Canadian roads for the same period had a surplus of 34,740 cars, of which 31,400 were box cars.

Car Loading in Canada

Revenue car loadings at stations in Canada in the week ended July 18 totaled 51,123 cars as compared with 51,467 cars in the previous week and 51,463 in the same week last year. Coal was 2,620 cars lighter than a year ago and miscellaneous freight was 908 cars heavier. Pulpwood and other forest products were also heavier by 595 cars and 513 cars respectively.

	Total for Canada			Cumulative totals to date	
Commodities	July 18 1925	July 11 1925	July 19 1924	1925	1924
Grain and grain products	4,716	4,951	4,924	168,381	234,190
Live stock	2,117	2,094	1,980	63,042	62,130
Coal	2,080	2,044	4,700	98,733	139,756
Coke	316	269	204	7,992	6,863
Lumber	3,957	3,941	4,070	99,076	104,819
Pulpwood	2,458	2,442	1,863	86,939	88,722
Pulp and paper	1,800	1,869	1,696	59,163	58,158
Other forest products	2,923	2,850	2,410	85,354	79,960
Ore	1,718	1,415	1,474	37,867	34,365
Merchandise, l.c.l.	15,369	15,849	15,381	431,141	409,794
Miscellaneous	13,669	13,743	12,761	332,231	330,941
Total cars loaded	51,123	51,467	51,463	1,469,919	1,549,698
T't'l cars rec'd from connections	32,755	29,482	28,389	959,431	941,118

Fees for M.-K.-T. Reorganization Reduced by I. C. C.

Commissioner Eastman has long dissenting opinion opposing amount commission establishes

WASHINGTON, D. C.

THE compensation of the reorganization managers in connection with the reorganization of the Missouri-Kansas-Texas and the fee for their counsel have been fixed at $900,000 and $600,000 respectively by the Interstate Commerce Commission, in a report dated July 21 made public on July 27. The commission finds these amounts to be "reasonably necessary and appropriate and compatible with the public interest," instead of $1,614,249, with an allowance of $750,000 to counsel, proposed in the reorganization plan. Commissioners Eastman, McManamy and Campbell dissented and Commissioners Hall and Woodlock took no part in the disposition of the case. While the commission's report was very brief Commissioner Eastman wrote a long dissenting opinion criticizing the finding of the majority and Commissioner McManamy wrote a short dissenting opinion.

The commission's order of December 4, 1922, authorized an issue of securities by the Missouri-Kansas-Texas Railroad Company, which acquired the greater portion of the property of the former Missouri, Kansas & Texas Railway Company, pursuant to a plan of reorganization dated November 1, 1921. Among other things, the plan provided that the amount of $18,420,800 should be obtained by assessments on the stockholders of the former company, and that in return for those payments and the surrender of their shares the stockholders should receive certain securities of the new company. The plan further provided that the cash fund so obtained should be used to meet various expenses in connection with the reorganization, including compensation and expenses of the reorganization managers, and to provide the new company with $4,000,000 of working capital, any balance remaining to be paid into the treasury of the new company to be used for additions and betterments.

The plan included a provision that for their services the reorganization managers should receive a sum equal to three-fourths of one per cent of the aggregate principal amount of the new bonds and fifty cents per share of the new stock which would be issuable under the plan to depositing security holders and stockholders if all securities and stock of each class dealt with under the plan became subject thereto. Computed in that manner, the managers' compensation would amount to $1,614,250, and they propose an allowance of $750,000 to their counsel. The propriety of these amounts was not determined in connection with the prior order, but was left to future determination by the commission. A full hearing was had and an elaborate record was taken, followed by arguments on brief and orally.

The reorganization managers are J. & W. Seligman & Co. and Hallgarten & Co., bankers, of New York City. Their counsel are Cravath, Henderson & de Gersdorff and Larkin, Rathbone & Perry, of the same city.

The Commission's Decision

The commission's finding was as follows:

We are relieved of the necessity of determining whether the compensation which shall be allowed will in fact have been paid out of the proceeds of the securities issue before mentioned, and therefore within the contemplation of section 20a, or will have been paid directly out of the cash fund derived from the assessments upon the stockholders of the old company, inasmuch as the managers have agreed in writing that their compensation and the fees of their counsel shall be determined by us and that they will abide by our determination.

To review with any degree of comprehension the detailed services rendered by the managers and their counsel in furtherance of the reorganization would unduly extend this report and serve no really useful purpose. There is no definite formula by which services of the kind can be accurately evaluated, and the determination here necessarily rests within our best judgment, to be exercised in the light of all the applicable considerations. Balancing the capable services and the results which the managers and their counsel have performed and achieved in this reorganization against the public interest in the expenditure of large sums by a common carrier subject to the act, and upon a full and careful consideration of all the evidence of record, we reach the conclusion that the compensation of the reorganization managers should not be in excess of $900,000 and that the fee of their counsel should not be in excess of $600,000. We find that compensation for the managers and fee for their counsel in the amounts specified, in so far as the amounts may be paid from proceeds of the above-mentioned securities issue, are reasonably necessary and appropriate and compatible with the public interest and otherwise within the requirements and conditions of section 20a of the act. It appearing that a fund of $2,364,250, in the hands of the managers and out of which their compensation and the counsel fees are intended to be paid, has been invested by the managers in government securities bearing interest at the rate of 3.5 per cent per annum, this finding also covers disbursement to the managers and counsel of proportionate interest at that rate since the date of such investment upon the compensation and fee herein found to be proper. The remainder of the fund, with its proportionate interest, should be paid over to the new company.

Commissioner Eastman's Dissenting Opinion

Commissioner Eastman said in part:

The report of the majority, in my judgment, deals inadequately with a question of great public moment and reaches a conclusion which the facts do not wholly justify.

These managers and committees, of course, desire and expect to receive adequate compensation for their services. As I see it, the amount of this compensation has usually been a matter of mutual determination. Certainly the affairs of sick or dying corporations have become a most profitable field of exploitation for bankers and lawyers. Such a situation challenges attention, particularly where the corporations are engaged in public service. In such cases, at least, the public interest is directly involved.

The compensations in question are $1,614,249 for the reorganization managers and $750,000 for their counsel. The former amount was fixed by agreement between the reorganization managers and the committees representing the various classes of creditors. The creditors or stockholders who deposited their securities with these committees under this plan were, strictly speaking, the parties to this agreement together with the reorganization managers, but the approval by these depositors is of little real consequence.

It will thus be noted that we are asked to give great weight to the fact that the compensation of the reorganization managers was approved by the 23 committees representing security holders. But the same agreement made the reorganization managers the sole judges of the propriety or expediency of the compensation to be paid to each and every one of these committees. This fact materially impairs the weight to be given to the agreement, so far as the compensation of the reorganization managers is concerned, if it does not wholly deprive it of weight.

The reorganization managers were separately reimbursed for their out-of-pocket expenses, including such matters as advertising, printing and engraving, telegrams and cables, stationery and postage, travelling expenses, special stenographic services, etc. The record shows that to the end of 1922 they had been paid $107,000 on this acount. What they were thereafter paid does not appear.

The reorganization managers were separately reimbursed for the services of a firm of engineers which they employed, the amount paid on this account being $153,675.

The reorganization managers, as such, incurred no liability in connection with the underwriting of the reorganization plan. The underwriting was done by a separate syndicate of bankers, which received $974,921 all told, in commissions and profits. The reorganization managers were members of this syndicate, and received out of the amount just mentioned about $149,000. Inasmuch as 98 per cent of the stockholders of the old company paid the assessment, the actual risk and burden in connection with the underwriting proved by events to be insignificant.

The reorganization managers were not required to bear the expense of foreclosure of any of the various mortgages. The record shows that there were separate payments for the compensation of the trustees under these mortgages and for the fees of their counsel, aggregating between $655,000 and $1,000,000. It does not disclose the exact amount.

The reorganization managers were not required to bear any of the expense of the receivership. The record shows that they freely utilized the services of the receiver and his employees in procuring needed information. They also utilized the services of the old company and its employees. Thus it is stated that the reorganization managers caused the old company to organize a special force, which at times embraced as many as 240 persons, to collect desired information from the records. The compensation of these "240 persons" formed no part of the expense of the reorganization managers.

Answers Arguments of Reorganization Managers

I shall now undertake to set forth certain matters which seem to me to lessen the weight of the evidence supporting the compensation sought by the reorganization managers and by their counsel:

1. The reorganization managers were two large banking houses in New York City. It is not clearly shown why one large banking house could not have carried on the work satisfactorily.

2. The reorganization managers employed two great legal firms in New York City as their counsel. It is not shown why one great legal firm could not have carried on the work satisfactorily.

3. No record was kept of the time devoted by the reorganization managers or their counsel, or by persons in their employ not separately compensated, to the reorganization work. All that the record contains are estimates, dependent upon recollection.

4. The witnesses who testified in support of the propriety of the compensation in question were all, with one exception, associated with the reorganization managers or their counsel, or associated with some one of the protective committees whose compensation was fixed by the reorganization managers, or associated with some trustee under one of the various mortgages upon the "propriety or expediency" of whose charges the contract made it the duty of the reorganization managers to pass. The single exception was a New York banker who is himself interested in the reorganization of railroad corporations.

5. Out of the total time which the reorganization managers claim is covered by the compensation in question, two years and two months were embraced by the period of federal control of railroads. It is admitted that the effort to bring about a reorganization practically ceased during that period.

Argument Would Lead to Theory that Receiver Was Overpaid

6. The record is also replete with details indicating that the reorganization managers acted substantially as a board of directors for the receiver in all matters affecting the management and operation of the property during the period of the receivership. It conveys the impression that the receiver seldom if ever took an important step, even though its importance was small, without the advice of these bankers, and that their time was seriously burdened by the duty of perusing and studying and reaching conclusions with respect to reports which he was continually making to them. The receiver was appointed by the court to administer and conserve the property in the interests of the creditors of the old company, and he was paid for his services in a manner befitting a man of dominating force and ability. The record shows that he was paid an equivalent of $70,000 per year over and above all expenses, and that he was liberally supplied with such operating and legal assistance as he desired. His counsel received an average of $49,600 per year. If, in fact, the reorganization managers were the power behind the throne, entitled to compensation at a rate of more than $100,000 per year for the services which they rendered in an advisory capacity, then the receiver was paid beyond his ability and deserts.

7. The claim is made that the compensation should be considered as if it were divided into annual installments, a substantial portion thus becoming merely interest upon installments due but not paid. Doubtless the reorganization managers might have made a contract to work for so much per year, payable at the end of each year, and might have insisted upon interest if payments were not made at the times so stipulated. They did not do this, and the claim that a part of the compensation specified by the agreement of 1921 consists of interest is without legal foundation.

8. An attempt is made to apportion the "overhead expenses" of the two banking firms and their two firms of counsel, so as to ascertain the portions assignable to the reorganization work in question. These amounts are then deducted from the charges in question upon the theory that they represent expense rather than profit. I do not find this apportionment convincing.

9. A showing is made in great detail of the large number of legal documents which it was necessary for counsel to draft or pass upon in connection with the reorganization work. It is well known that the forms of many such documents are largely stereotyped as the result of past experience in similar proceedings. It is not here clearly shown in how many instances new principles were involved or in how many instances it was necessary to pursue new paths hitherto untrod or only partially explored.

Comparison with Compensation of Engineers

10. The record leaves the impression that one of the most important, intricate and difficult pieces of work in connection with the reorganization was the work done by the firm of engineers in reporting in detail upon every main and branch line of the entire property, covering not only physical conditions and valuation but methods of operation, past earnings and future prospects. For this work, as aforesaid, a total of $156,675 was paid, and this covered not only the original report but a retainer throughout the period of the reorganization work. This amount may be contrasted with the $750,000 now sought by counsel for the reorganization managers.

11. For the reasons stated in my dissenting expression in *Missouri-Kansas-Texas Reorganization*, 76 I. C. C. 94, 108, I have not been impressed by the results obtained by the reorganization managers. They did succeed in concentrating the control of property carried on the books at more than $270,000,000, in a relatively insignificant amount of nondescript common stock without par value, thus facilitating acquisition of control by a rival or competing company. During the past year this has happened. Whether or not the acquiring company, prior to taking steps to actual unification or consolidation, will do as much as an independent management might have done in the development of the M.-K.-T.'s earnings and resources remains to be seen.

So much for the doubts which the record, as I see it, casts upon the compensations which these reorganization managers and their counsel wish us to approve. There is much to be said upon the other side, although it is not said in the majority report. Undoubtedly the reorganization of this property involved a great many complexities, both financial and legal. It was a task requiring long and patient perseverance and a high order of experience and ability. The two banking houses possessed excellent standing and commanded confidence in the financial world, and the same may be said of their two firms of counsel. The work also involved some risk of loss of profits in the event of failure or partial failure of the plan. How are we to weigh the pros and cons and reach a conclusion as to the compensations which were fair and reasonable under the circumstances?

It was testified in this case that the services of one of the lawyers were worth $500 per day. Men receiving such compensation usually entertain a righteous conviction that they correspond with intrinsic worth, although at the same time they may be incensed that painters or carpenters should assume to demand and be able to exact $15 per day for their services. Such contrasts have interest but offer little help in our inquiry.

A vital difficulty that we encounter, as I see it, is met at the outset, and it is that the compensations in this issue were not arrived at in what may be called an open market. The agreement of 1921 had no such aspect. It was not arrived at in the course of business dealings at arm's length, but is tempered and colored by the element of mutual self interest. I also attach little importance to the comparisons afforded by the compensations paid for similar services in the case of similar reorganizations in the past. For aught we know they have been and probably were, determined in a similar way.

A Public Trust

Economy in the government service is much stressed at present, and quite properly so, but economy in the public service, interpreting that term broadly to include all private corporations engaged therein, is no less important. The people of this country suffer no less burden, directly or indirectly, from waste and extravagance by a railroad company engaged in the public service than from waste and extravagance by a department of the government. And particularly is a policy of scrupulous care in expenditure to be enjoined when the victim of any extravagance is an ill or disabled public service corporation which

has disappointed the hopes of many presumably innocent investors. Professional services rendered in connection with the rehabilitation of such corporations ought, I think, to be regarded in the light of work done in the administration of a public trust, and compensation therefor should be held to the minimum point which will make it possible to enlist in such work the services of men of the necessary standing, experience and ability.

Taking all the facts into consideration, I am not persuaded that the bankers and lawyers in question are entitled to more than half of the compensation which they seek. If they were allowed $1,200,000 in the aggregate, they would, in my judgment, be generously treated. This amount I would allow them to divide in the same ratio as the amounts for which they seek approval. This conclusion is based upon the special circumstances of this case, which were unusual, particularly with respect to the period of time covered by the work of the reorganization managers and their counsel. I have also taken into consideration the fact that the work was undertaken and the compensation fixed, without thought that it would be subject to public supervision or judged by other than prevailing standards of the financial world. The conclusion should not be construed as an indication that I believe that future reorganizations of like character should reasonably cost as much as the above amount. On the contrary, it is my opinion that steps can and should be taken to decrease materially the expense of administering and reorganizing the affairs of bankrupt or financially disabled corporations engaged in the public service.

Commissioner McManamy Dissents

Commissioner McManamy said in part:

Railroad reorganizations such as the one under consideration are undertaken primarily because adverse attempts by each class possessed of interests in the property to enforce contractual rights to the letter would probably result in magnified loss to all, or to a great majority. In other words, reorganization is undertaken in the interests of the creditors, secured and unsecured, and the shareholders of a corporation in financial straits.

It must be kept in mind that it is not the interest of either the old or the new company with which we are primarily concerned, but the interest of the public. In my opinion it is economically unsound and incompatible with the public interest to saddle upon the new company the expenses of, and compensation for, the services of the reorganization managers and their counsel. That shareholders of the old company entered into agreements looking to the capitalization by the new company of these and other expenses and that the reorganization managers agreed in writing to accept our determination of the amount of their compensation does not touch upon the merits of the question. Our authority and duty under section 20a of the interstate commerce act to examine into the propriety of proposed security issues, and into the propriety of the uses to which they may be applied, can not be diminished by any such agreement. I am convinced that this commission should not have accepted in principle, and should now disapprove, the capitalization by the new company of these expenditures. Certainly if such expenses are chargeable at all to the new company in a reorganization designed to effect a sounder financial structure they are not properly payable out of the proceeds of capital issues. Because of increased and increasing expenditures of time and money employed in such reorganizations. I am further convinced that we should now announce as a general rule that some method other than inclusion in the securities of a reorganized company, or embodiment in any new securities, must hereafter be devised to take care of expenses incident to the protection of the interests of creditors and shareholders of a railroad organization in financial difficulties.

Payments exceeding in the aggregate those approved by the findings have been, or are to be, made out of the fund of $18,420,800 now represented by securities of the new company. These include such matters as compensation of and expenses of a score of protective committees for security holders and fees of their counsel, for depositaries, trustees' compensation and fees of their counsel, special masters' fees and expenses, and for certain miscellaneous expenses in connection with the reorganization. What I have said with particular reference to compensation to the reorganization managers and their counsel applies with equal or greater force to expenses of the nature indicated. No part of such charges should be permitted to be embodied in the securities of the new organization.

For the First Time in the history of Canada 3,000 Indians from the four Western Provinces and Montana have journeyed into Macleod, Alberta, to hold an all-Indian celebration and to form a league of plains Indians. Numerous celebrations were held by the Indians and it is estimated that over 5,000 visitors witnessed the events.

Agriculture Earning Greater Return Than Railway Capital

Washington, D. C.

According to a statement issued by the Department of Agriculture to the press, agriculture in the year ended June 30, 1925, earned a greater percentage of return on the capital invested in it than the railways have been able to earn on their investment for some time, although Congress, in the Hoch-Smith resolution passed in January, referred to the "existing depression in agriculture," in directing the Interstate Commerce Commission to conduct an investigation to see if agricultural freight rates may be reduced. The return was at the rate of 4.6 per cent, the department says, as compared with 3.3 per cent in the year ended June 30, 1924, and this was declared to be "not sufficient to yield both a fair return on the capital invested in the business and a fair wage for the labor of farm operators and their families." The railways in the calendar year 1924 earned at the rate of 4.33 per cent on their property investment and in the five months of 1925 for which the figures are now available they earned at the rate of 4.38 per cent. The statement, which is headed: "Farmer Makes More But Returns Still Low," reads as follows:

Although agriculture in the United States did better financially in the year ended June 30, 1925, than in the preceding 12 months, its income was nevertheless not sufficient to yield both a fair return on the capital invested in the business and a fair wage for the labor of farm operators and their families. This is brought out by the Department of Agriculture in an analysis of the agricultural balance sheet for the last crop year.

On the capital invested in agriculture the return for the year ended June 30, 1925, says the department, was at the rate of 4.6 per cent compared with 3.3 per cent in the year ended June 30, 1924. This return represented interest on the investment and payment for the managerial services of farmers. It was the net income that remained after providing for operating expenses and property taxes, and making an allowance for the unpaid labor of the farmer and his family at hired labor wage rates. In round figures the net income for the 1924-25 season was $2,712,000,000, compared with $1,992,000,000 in 1923-24.

But this sum did not go exclusively to farmers, because farmers do not own all the capital invested in agriculture. They own only about 79 per cent of it, and have to pay interest on the balance. It is estimated by the department that the current value of the total capital invested in agriculture was $59,154,000,000 in 1924-25, compared with $59,548,000,000 in 1923-24. When farm indebtedness is subtracted from these figures, the remaining amounts are approximately the value of the capital owned by actual farm operators. In 1924-25 the value of the farmers' unencumbered capital, according to the department, was $46,904,000,000 compared with $47,298,000,000 in the preceding crop year.

In estimating the net return to the actual farm operator in the crop year 1924-25, the department divides the gross return on this unencumbered capital in the same way as it does the gross return to all the capital invested in agriculture. That is to say, it reckons the net income available for interest on capital and the managerial services of the farmers after deducting operating expenses, taxes and an allowance for the labor of the farmer and his family. On this basis the return on the farmer's unencumbered capital in 1924-25 was 4.1 per cent, compared with 2.5 per cent in the preceding year.

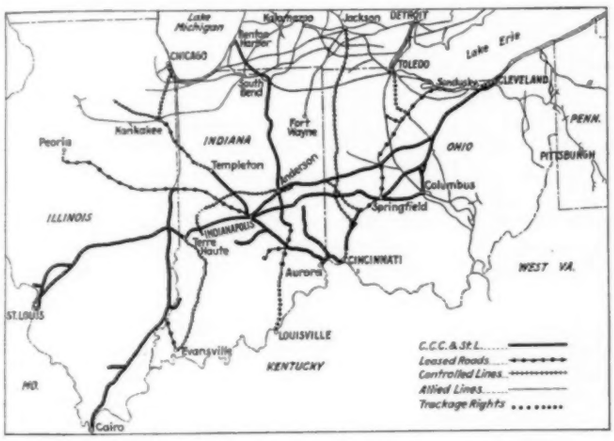
While this is a gratifying increase, it still comes far short of equalling the rates that the farmer has to pay for the use of borrowed capital. Interest paid by farmers on mortgage and other indebtedness in 1924-25 was 6.4 per cent, and 6.6 per cent in the preceding year. Thus, as a combined return for the use of their capital and for their own managerial services, farmers received around 2 per cent less than was paid solely for the use of other capital, under conditions not requiring the lenders to take any responsible part in production.

The Cincinnati Northern will soon place its first gasoline rail cars in service between Cincinnati, Ohio, and Jackson, Mich. Four of the cars have been ordered, two of which will be used for through service and the others for local service.

Big Four Improves Relative Position

In 1924 moved largest traffic in history with single exception of 1923—Not hurt by coal situation

THE Cleveland, Cincinnati, Chicago & St. Louis annual report for 1924, made public on Tuesday, shows net income after charges of $8,080,932, equivalent after preferred dividends to $16.12 on the common stock outstanding at the end of the year. Net income in 1923 was $11,617,354, equivalent after preferred dividends to $23.62 a share on the common stock. The decrease in net income in 1924, as compared with 1923 amounted to $3,536,423, or about one-third. The reasons for this substantial reduction were several. They included a slightly decreased traffic, a somewhat larger decrease proportionately in gross revenues, and a change in the per diem situation, whereby there was a marked in-



The Cleveland, Cincinnati, Chicago & St. Louis

crease in the debit hire of equipment balance. These factors, as will be explained in more detail below, resulted in a decrease in the net railway operating income, or net after equipment and joint facility rents of $2,327,634, or 14 per cent, which decrease represented about two-thirds of the total decrease in net after charges. The other third was represented by the decrease in non-operating income of $1,122,966, explained principally by the inclusion in the 1923 earnings of a $200,000 dividend on the stock of the Indianapolis Union Railway (no such dividends being paid in 1924) and by the inclusion in the 1923 earnings also of $748,076, miscellaneous income, resulting from an adjustment in connection with the final settlement with the United States government for operations during the guaranty period.

At the present time the New York Central owns 84.69 per cent of the preferred stock of the Big Four and 91.31 per cent of the common, or 90.15 per cent of the total outstanding stock. Both issues of stock now pay five per cent dividends. These total $2,851,360, of which naturally nine-tenths accrue to the parent company. The Big Four operates 2,398 miles of line. Its lines fan out from Indianapolis, Ind., and to a lesser extent from Columbus, Ohio, and Cincinnati, reaching from Cleveland on the east, to Chicago, Peoria, St. Louis and Cairo on the west. A leading feature of the road's operations is its unusually large number of interchange points with other carriers and the large proportion of interchange business. The company's annual report does not show the proportion of traffic received from connections, but the weekly car loadings reports indicate that the company receives from other companies about 20 to 40 per cent more loaded cars than are loaded on its own rails. Big Four representatives refer frequently to the large number of transfer points for l. c. l. freight.

Coal Traffic

The Big Four, as is befitting the fact that it is a New York Central property, is noted for its excellence in fast freight service. The road's traffic is fairly diversified, but by far the most important single commodity carried is bituminous coal, which in 1923 and 1924 constituted about 55 per cent of the total revenue tonnage. The situation in the coal industry is so acute at present as to justify a brief examination of the road's coal traffic. The Big Four itself serves probably about 75 coal mines, about 50 of which are in Illinois and the remaining 25 in Indiana, on the former Evansville, Indianapolis & Terre Haute, which is controlled by the Big Four through ownership of stock, but separately operated. These mines are now giving the road about 2,500 cars weekly, as against about 2,500 a week at this time last year, and as compared with 3,000 in June or July, 1923. However, in the latter part of 1922 and 1923 the coal loadings ran up to 4,000 or 4,500 weekly. Whether, in view of the handicaps now being met in the union coal fields, like figures will be reached later in 1925 may be a question. In addition to the coal that the Big Four originates on its own lines, it receives a large volume from connections. This coal is received, notably, from the Louisville & Nashville at Cincinnati. It is non-union Kentucky coal and moves chiefly to Chicago, or through Chicago to the West and Northwest, and also to the industrial centers served by the Big Four, such as Detroit, Toledo, Cleveland, etc. Some coal is also received at Evansville, Ind. The Big Four does not handle any considerable volume of lake coal. The combination of circumstances in 1924 was such that the losses of coal orig-

CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS, OPERATING RESULTS, SELECTED ITEMS, 1914 TO 1924

Year ended Dec. 31	Mileage	Revenue tons	Revenue tons miles	Average haul	Rev. per ton mile, cents	Rev. train load	Rev. car load	Total operating revenues	Total operating expenses	Net operating revenue	Operating ratio	Net after charges
1914	2,381	26,077,890	4,416,784,917	169	.0531	548	22.4	$35,365,691	$28,954,969	$6,410,721	81.87	Def. $1,960,418
1915	2,385	27,483,677	4,763,382,878	173	.0557	589	22.3	38,364,087	27,528,367	10,835,720	71.76	3,404,731
1916	2,387	32,902,583	5,848,072,312	178	.0556	654	22.8	46,678,240	31,221,977	15,456,264	66.89	8,331,702
1917	2,387	35,802,523	6,372,050,048	178	.0566	691	25.0	52,650,920	38,059,421	14,591,499	72.29	5,257,807
1918	2,396	39,215,867	7,010,027,424	179	.0712	779	27.4	71,403,970	51,895,289	19,508,682	72.68	3,120,363
1919	2,409	33,264,333	6,042,170,957	182	.0839	768	25.8	73,856,456	57,427,452	16,429,004	77.76	577,786
1920	2,421	38,513,685	6,874,262,476	179	.0885	799	28.8	88,862,078	74,635,269	14,226,809	83.99	5,888,779
1921	2,411	30,043,632	5,318,082,269	177	1.058	707	27.1	79,793,593	64,406,122	15,387,471	80.72	2,929,949
1922	2,409	35,828,091	6,589,757,976	184	.0935	843	27.3	84,665,690	64,858,314	19,807,377	76.61	7,528,837
1923	2,408	44,856,746	7,961,881,684	178	.0872	911	28.8	94,941,444	72,114,741	22,826,703	75.96	11,617,354
1924	2,398	43,072,973	7,618,966,008	177	.0841	897	28.9	87,712,381	66,740,728	20,971,654	76.09	8,080,932

inating on the company's lines were made up by the coal received from connections. The total coal tonnage for the year was only 4.75 per cent less than in 1923.

Results in 1924

The Big Four's total revenue tons in 1924 were 3.95 per cent less than in 1923, and the revenue ton-miles 4.31 per cent less. These decreases were sufficiently small so that both the revenue tons and the revenue ton-miles were larger than for any previous year, with the single exception of 1923. In 1924, as compared with 1923, there was a decrease of 7.6 per cent in freight revenues and similarly a decrease of 7.6 per cent in the total revenues. The reason for the comparatively larger decrease in gross revenues than in revenue ton-miles is explained by the decrease in the revenue per ton per mile from 0.872 cents in 1923 to 0.841 in 1924. Operating revenues in 1924 totaled $87,712,381, as compared with $94,941,444, in 1923 the decrease amounting to $7,229,063. As compared with this there was a decrease in total operating expenses of $5,374,013, or 7.46 per cent, the 1924 operating expenses totaling $66,740,728 as compared with $72,114,741 in 1923. The operating ratio was 76.09 in 1924 and 75.96 in 1923. The net revenues—revenues less expenses—were $20,971,654 in 1924, a decrease of $1,855,050.

Analysis of the decrease in total operating expenses discloses the usual picture that has been drawn in these columns concerning most other railways that have herein been reviewed. Thus the maintenance of way expenses decreased $186,149 in 1924, as compared with 1923, or but 1.7 per cent. The decrease in transportation expenses was $2,052,496, or 5.94 per cent. A substantial proportion of this decrease—over one-half—was in the fuel bill. There was also a substantial reduction in payments for freight loss and damage. The spectacular comparison comes, as in the case of most other roads, in the expenses for maintenance of equipment. These expenses decreased $3,223,392, or 14.4 per cent. Thus three-fifths of all the decrease in operating expenses was in maintenance of equipment. Furthermore, there was a decrease of 23.7 per cent in the amount spent in 1924 for repairs to freight cars. The decrease in that account of $1,876,601 was equivalent to 58 per cent of the decrease in maintenance of equipment expenses, and equivalent to 35 per cent of the decrease in total operating expenses. This result followed from the heavy program of equipment rehabilitation which took place in 1923.

Net railway operating income or net after equipment and joint facility rents in 1924 was $14,364,267, as compared with $16,691,901 in 1923, a decrease of $2,327,634, or 13.95 per cent. Part of this decrease has been explained by the decrease in net revenue from operations. There was in addition an increase in the debit hire of equipment balance from $269,866 in 1923, to $1,112,206 in 1924, or $842,341. This unfortunate result came about partly from the effect of retirements of freight cars in the rehabilitation program, but more exactly from the change in 1924 in the road's coal traffic. The Big Four, in short, was required to pay per diem on foreign coal cars while its own cars were idle, due to conditions in its own fields.

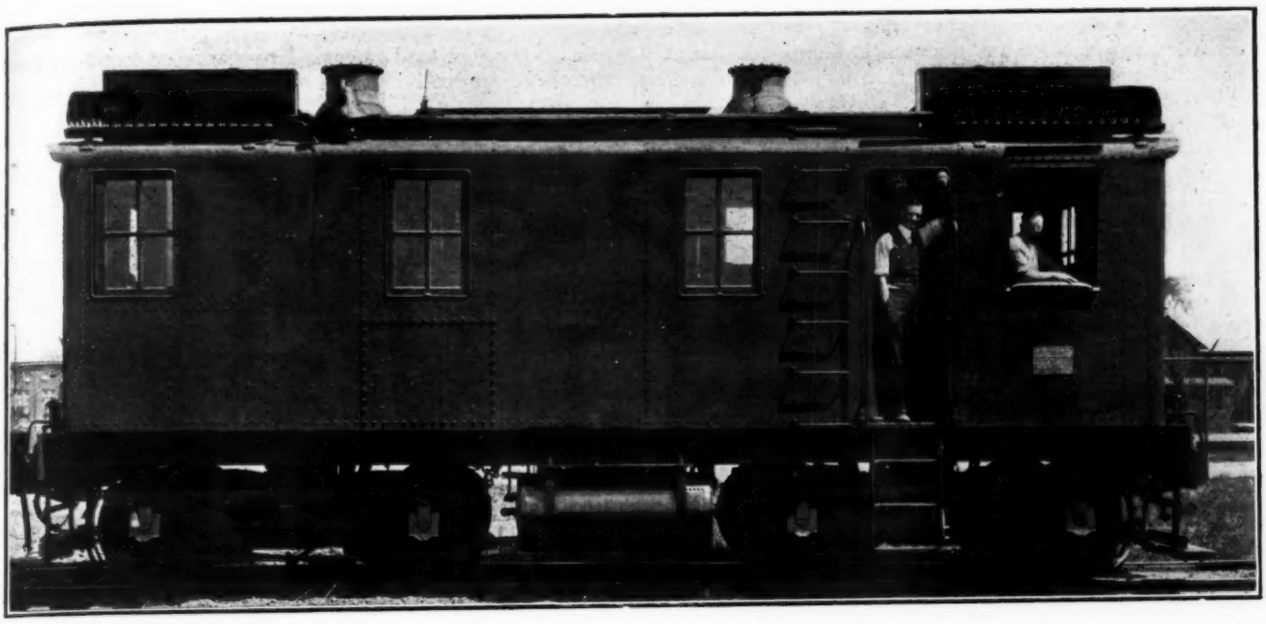
Comparison with Other Roads

The Big Four is at present in a favorable position from the standpoint of its equipment condition. Figures for May, the latest now available, showed an average for the month of only 5.6 per cent unserviceable cars. Of the freight locomotives 19.8 per cent were reported unserviceable, but there were 78 locomotives, or about one-fourth of the total owned, stored in serviceable condition.

The Big Four—in common with the other properties in the New York Central system—has evidenced in recent years a marked improvement in its earning power. Thus, in spite of the decrease in net corporate income in 1924, as compared with 1923, the net was greater than for any other previous year, with the exception of 1916, and it was only about $300,000 less than in that year. In last week's issue of the *Railway Age* there was presented an interesting article by H. M. Sperry, entitled, "The Trend of Railway Earnings Shown in Charts." In this study a table and charts were given comparing the revenue ton-miles and the revenue per ton-mile for the several regions in 1923 and 1924, with the figures for the year ended June 30, 1916, and comparing the net railway operating income for 1923 and 1924 with the standard return for operations during federal control. The Big Four is reported in the central eastern region. The Sperry study showed that the roads in that region as a whole in 1924 moved only 0.6 per cent more revenue ton-miles than in 1916 and had revenues per ton-mile 72 per cent in excess of the 1916 average. It is interesting to compare the situation of the Big Four. Its revenue ton-miles in 1924 were 36 per cent in excess of those for the year ended June 30, 1916, as against the region's increase of only 0.6 per cent, but the increase in the revenue per ton per mile was only 53.5 per cent. The increase in the amount of traffic handled was such as to compensate for the lower ton-mile earning, so that the Big Four in 1924 earned net operating income equivalent to 144.5 per cent of its standard return, whereas the region as a whole earned in 1924 only 112 per cent of the region's standard return. To assist in explaining the Big Four's decreased earnings per ton per mile it should be added that in 1916 bituminous coal constituted only about 40 or 45 per cent of the revenue tonnage, as against 55 per cent in 1924. However, it is evident that the Big Four has markedly improvd its comparative position in recent years. It is of interest in this connection that in 1923 the Big Four's net railway operating income was reported by the Interstate Commerce Commission as being 6.2 per cent of its investment in road and equipment, inclusive of materials and supplies and cash. The rate for 1924 has not yet been reported.

The Big Four, as previously noted, now pays 5 per cent dividends on both its preferred and common stocks. The dividends on the preferred were established at the 5 per cent rate in 1916. They had been paid at that rate from 1891 to July, 1913, but none were paid from 1913 to 1916. In fact, in 1913 and 1914 the road had a deficit after charges. Common dividends were paid, but not regularly, at varying rates, in no case exceeding 4 per cent in the years from 1891 to 1910. In 1922 dividends were resumed on a 4 per cent basis. The 5 per cent basis dates back to April, 1924. This reflects the manner in which the Big Four, formerly one of the less prosperous parts of the New York Central system, has improved so that now it is more nearly on a parity with its sister companies. The figures given in the foregoing article do not include the operations of the Cincinnati Northern or of the Evansville, Indianapolis & Terre Haute, practically all of the stock of which companies is owned by the Big Four, but the operations of which are reported separately. The Cincinnati Northern has paid 6 per cent dividends for the past two years. The Evansville, Indianapolis & Terre Haute was reorganized under its present name in 1920. It was acquired by the Big Four in 1921 and has been operated at a deficit.

The Big Four thus far this year is showing improved results over those of last year. For the first five months of 1925 total operating revenues totaled $36,002,486, as compared with $35,950,025 in the same period of 1924. Net railway operating income for the year to May 31 this year has been $6,600,756, as compared with $5,248,283 in the first five months of last year.



New 60-Ton Oil-Electric Locomotive

Oil-Electric Locomotive Performance

Reduction in fuel, lubrication, per 1,000 *ton-miles and per mile costs are obtained—Stand-by losses reduced*

IN 1923 the American Locomotive Company, the Ingersoll-Rand Company and the General Electric Company built jointly the first oil-electric locomotive in America, a description of which was published in the *Railway Age* of May 10, 1924, page 1159. After four

Passenger Train Test on the Reading with Oil-Electric Locomotive

months' service in the yards at the Ingersoll-Rand plant at Phillipsburg, N. J., it was loaned to a number of railroads and industrial plants for switching service. On June 9, 1924, it was placed in service for a practical test on the New York Central in its freight yards on the west side of New York City. Up to July 9, 1925, it has been used by 14 different railroads and industrial plants during which time complete data have been recorded daily as to its performance. The following table is a resume of the data obtained while the locomotive was in service on different roads:

	Hours	Load Factor	Cost in Cents per Locomotive Hour	Cost in Cents per Kilowatt Hour
New York Central	833	13	29.7	1.645
Baltimore & Ohio	81	12.25	33.3	1.53
Central of N. J.	35	8.7	28.7	2.02
New York, New Haven & Hartford	271	21.2	32.7	.946
Union Freight	40	9.5	19.8	1.46
Boston & Maine	132	14.1	32.7	1.32
Long Island	128	20.6	34.9	.964
Long Island	234.5	18.9	36.0	1.27
Bethlehem Steel Co.	9	30.15	57.5	1.075
Reading Co.	207	18.10	44.9	1.45
Delaware, Lackawanna & Western.	120	19.85	46.7	1.34
Hoboken Shore	26	13.1	38.0	1.76
New Jersey Zinc Co.	79	27.3	62.8	1.30
Alan Wood, Iron & Steel Co.	32	27.45	58.6	1.24
Total hours	2,227.5	*16.6	34.3	1.41

*Average.

Performance

Some of the results of the experimental service are significant. The locomotive was in switching service on the New York Central from June 9 to August 23, 1924, part of the time in 24 hour service, handling three shifts a day with only such inspection as was possible at the time of changing crews. The regular crews handled the locomotive, it requiring only about 15 min. for a demonstrator to show how the locomotive was operated. During this time the locomotive was in service 833 hr. of which 579.33 hr. constituted the actual time the unit was in operation which gives 253.66 hr. as idle time during which the oil engine was shut down. During this time there were 115,866 kw. hr. available of which 15,063 kw. hr. were generated which gives an engine load factor of 13 per cent. If the locomotive was idle more than ten min-

utes, the engine was shut off, which factor considerably reduced the stand-by losses. During its operation on the New York Central the unit used 2,400 gals. of fuel oil, equivalent to 4.14 gals. per hour of locomotive operation. An interesting feature developed in connection with fuel consumption was that on the average, one tank car of fuel oil used in the locomotive would do as much work as 12 cars of coal burned in the steam switching locomotive for which the oil-electric locomotive substituted. Inasmuch as the oil-electric locomotive can carry sufficient fuel oil for 48 hrs. operation, delays due to taking fuel were reduced to a minimum. There were also no delays due to taking water and no handling of ashes. While on the New York Central the locomotive moved 400,000 ton-miles, or 166 ton-miles per gallon of fuel. With a load factor of 13 per cent, the locomotive produced 6.3 kw. per gallon of fuel. At full load it is capable of developing about 10 kw. hr. per gallon.

The locomotive is provided with a distance speed recorder to determine the average mileage actually made by the switch engine replaced. It was found that the mileage was not quite three miles per hour. This is an interesting figure in comparing steam locomotive mileage figures for switching service as it should be borne in mind that an

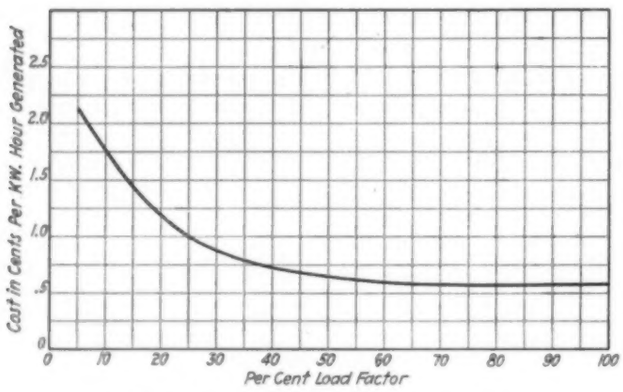


Fig. 1—Power Cost Per Kilowatt Hour

arbitrary figure of six miles per hour is the common factor used in computing railroad statistics.

The following table has been compiled to show in greater detail the performance of the locomotive under various conditions.

	Switching Service	24 Hr. Per Day Switching Service	Main Line Local Frt. Service	Light Yard Drilling
Total hours of locomotive service. . .	833	280	10	35
Total hours of oil engine operation. .	579.33	164	9.24	28.66
Total kw. hours generated.	15,063	4,098	520	499
Per cent load factor.	13	12.05	28.2	8.7
Total gallons fuel consumed.	2,400	672	54.5	80.75
Total gallons lubricating oil consumed	249	80	4	12
Total cu. ft. cooling water consumed.	67	neg.	neg.	neg.
Total gallons gasoline consumed. . . .	30	neg.	neg.	neg.
Cost of operation (fuel plus lubricating oil plus water plus gasoline)	$247.86	$73.60	$4.72	$10.37
Cost of operating per hour of locomotive service	$0.297	$0.265	$0.472	$0.297
Cost of operation per kw. hr. generated—in cents	1.645	1.8	0.91	2.08
Total ton-miles	400,000	112,930	16,615	. . . . .
Cost of operation per 1,000 ton-miles.	$0.67	$0.652	$0.284	. . . . .
Miles traveled	1,531	466	47	42
Cost per mile.	$0.162	$0.158	$0.10	$0.239

Note—Cost of operation shown above based on the following prices:
Fuel oil at 5 cents per gallon.
Lubricating oil at 50 cents per gallon.
Cooling water at $1.00 per 1,000 cu. ft.
Gasoline at 11 cents per gallon.

Three curves have been plotted from the performance data, the analysis of which develop some interesting facts. The power cost per kilowatt-hour curve shown in Fig. 1 indicates that as the load factor increases, the power cost decreases. The drop in cost is abrupt from a 5 per cent to a 30 per cent load factor. From here on to 60 per cent the curve gradually flattens out and then maintains an approximate straight line to 100 per cent load factor. Thus, it can be seen that this locomotive should be operated at a 60 per cent load factor to obtain the minimum cost per kilowatt-hour.

The curve for power cost per locomotive hour is shown in Fig. 2. Between the load factors of 5 and 20 per cent,

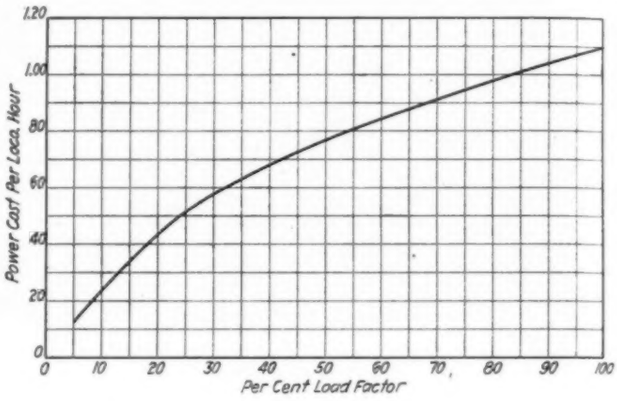


Fig. 2—Power Cost Per Locomotive Hour

the curve is steep and if it continued in this fashion, would, at approximately 50 per cent load factor, reach a cost of $1.05 per hour which figure is shown for a 91 per cent load factor. However, at 20 per cent load factor the curve shows a power cost of $0.43 and then gradually slopes off and at 100 per cent load factor shows a power cost per locomotive hour of $1.10.

The curve for fuel oil per kilowatt-hour is shown in Fig. 3. From a load factor of 5 per cent to one of 20

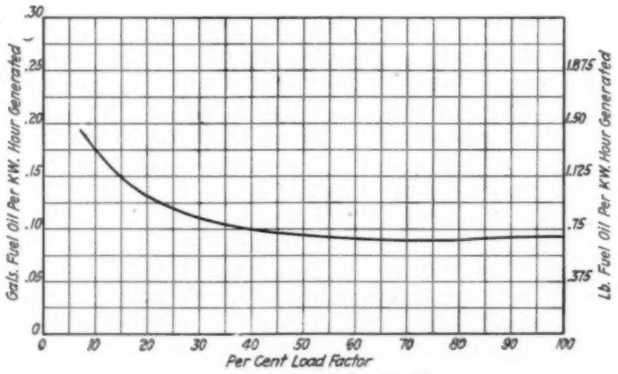


Fig. 3—Cost of Fuel Oil Per Kilowatt Hour

per cent the fuel oil cost per kilowatt-hour decreases 4.5 cents, 20 to 30 per cent load factor, 2 cents and from 30 to 40 per cent load factor one cent. From this point on to 100 per cent load factor the fuel cost per kilowatt-hour remains about 0.9 cents. Thus, it can be seen that the greater the load factor up to about 50 per cent, the less the cost of fuel consumed.

Another factor to be considered in the operation of this locomotive is the amount of wear of the various parts. In order to determine this, a system of regular inspections has been maintained. The first inspection was made February 12, 1924, and six months later, on September 12, the second inspection was made. The results obtained from these inspections are shown as follows:

Cylinder bore	.0005 to .001 inches wear. Cylinder appearance was excellent.
Pistons	Practically showed no wear since last inspection. Carbon on piston heads very light.
Piston rings	Appearance excellent, showed practically no wear, all the rings were free and in good condition.
Wrist pins and bearings	.001 to .008 of an inch wear. Appeared to be in fine condition.
Crank pins	.001 to .004 of an inch wear.
Main bearings	.0025 to .005 of an inch wear.
Air and exhaust valves	Both in excellent condition; showed practically no pitting and very light carbon.

After the crank pin, wrist pin and main bearings were set up to standard clearances the engine was closed exactly as it was taken apart as it was found unnecessary to renew any parts. The following is the data for the 60-ton oil-electric locomotive for slow switching service.

Engine

Type of engine	Ingersoll-Rand, 4 cycle vertical
Number of cylinders	Six
Cylinder dimensions	10 in. bore by 12 in. stroke.
Speed	600 r. p. m.
Capacity	300 hp.
Fuel	Fuel oil
Fuel injection	Direct injection
Fuel distribution	Rotating distributing valve
Lubrication	Forced feed with filtration
Lubricating pumps	Pressure pump and filter in crank case
Cooling	Water cooled
Radiator	Fin tube roof type 1,200 sq. ft. surface
Temperature control	Thermostat and by-pass
Fuel consumption	0.43 lb. per boiler hp. hr.
Piston speed	1,200 ft. per min.

Generator

Type	TDC-6-200 kw., 600 r. p. m. 600 volts
Exciter	6 kw. direct connected, 60 volt
Shunt windings	Separately excited
Series winding	Differential compound
Voltage variation	200 to 750 volts

Motors

Number of motors	4—Type RM—840, nominal rating 95 hp., each 600 volts
Connection	2 in parallel—Series and parallel grouping
Gearing	14 tooth pinion, 82 tooth gear.

Control

Method of control	By throttle lever—Automatic control of voltage 2-C-173-A controllers with electro-magnetic contractors and reverser
Battery (for lighting and control)	16 cells MV-7 Exide ironclad

Compressors

1—Type CP-26-600 volt with a piston displacement of 100 cu. ft. per min. for air brakes.
1 Mechanically driven pump mounted on engine furnished air for starting
1 Auxiliary engine driven compressor to furnish air for starting the oil engine.

Locomotive

Length inside knuckles	32 ft., 6 in.
Width of cab	9 ft., 4 in.
Trucks	2 axle swivel type
Width overall	10 ft.
Rigid wheel base	7 ft., 2 in.
Weight complete	120,000 lb.
Weight on drivers	120,000 lb.
Weight on each axle	30,000 lb.
Tractive effort	36,000 lb. at 30 per cent factor of adhesion maintained to one m. p. h. (approx.)

Nickel Plate Hearing

WASHINGTON, D. C.

HEARINGS on the Nickel Plate unification plan before Commissioner Meyer of the Interstate Commerce Commission and Director Mahaffie of its Bureau of Finance, which were resumed on July 20, were continued throughout last week and into this week, with no prospect of a conclusion in sight. The two principal witnesses for the applicant, O. P. Van Sweringen and J. J. Bernet, have been temporarily excused after long cross-examination by opposing counsel, but with the expectation that they may be re-called later for further questioning, and after the additional Nickel Plate witnesses have been heard and cross-examined it is understood the protestants have a large number of witnesses to be heard.

Cross-examination of O. P. Van Sweringen, who had been on the witness stand for several days, was concluded on July 23, with the understanding that he might be recalled later after H. W. Anderson, counsel for the Chesapeake & Ohio minority stockholders, had examined a large amount of data in the shape of documents and statistics which he had called for during his previous questioning of Mr. Van Sweringen. This included information regarding purchases of real estate for the Cleveland terminal and also a detailed statement of the purchases by the Van Sweringen interests of stock of the railroads proposed to be unified. Mr. Anderson kept insisting that he would show that the entire transaction was for the purpose of stock manipulation and would result in large profits to the promoters. Toward the close of the session on July 22 he presented a table purporting to show that the Van Sweringens had purchased stocks for the purpose of obtaining control of the railroads for $52,347,339 and that the new Nickel Plate stock to be issued in exchange would represent a paper profit for the Van Sweringens of $75,000,000 on some hypothetical basis of market value. Mr. Van Sweringen objected to the figures as being incorrect and agreed to check them overnight but the following morning Mr. Anderson said he would withdraw them, because of some corrections that had been pointed out by counsel, and would reintroduce them later by a witness of his own. Newton D. Baker, counsel for Mr. Van Sweringen, said the figures were incorrect in every aspect but that they had not been withdrawn until after they had been published in the newspapers.

Mr. Anderson also sought to make a point by showing that considerable deposits of Chesapeake & Ohio cash had been made in three Cleveland and two New York banks, including J. P. Morgan & Co., after the Van Sweringens had gained control of that road, and asked if they had made loans from those banks. Mr. Van Sweringen replied that the Cleveland banks were those he had been doing business with for years and that he had made loans from them but that they were the kind of loans, secured by listed colateral, that could have been made without deposits, and that the change in C. & O., deposits was a result of a shift of the center of their banking operatoins with the increase in their business. Mr. Anderson asked for a statement of all these loans but agreed to confer with Mr. Baker on the subject before a question was raised as to the extent as to which such transactions should be made public. Mr. Van Sweringen said he did not know that he would care to go that far in disclosing such matters.

When Mr. Anderson asked whether the Nickel Plate had any written or verbal understanding with the New York Central as to the future relations between those roads or whether there was any such understanding between the interests representing the roads Mr. Van Sweringen said there was none except the usual agreements between roads in the ordinary course of operation.

The controversy as to whether the records of the deposit committee should be brought in was settled without a decision by the commission when Mr. Baker said that the records of the committee and its correspondence were in active use at Cleveland but that they would be made freely available to Mr. Anderson if he would go to Cleveland.

Mr. Anderson asked again to be furnished with copies of all correspondence, figures and data exchanged between officers of the railroads, the committee and the Van Sweringens in connection with the formulation of the basis for the plan of exchange of stock. Mr. Van Sweringen had previously said that such data had not been preserved but agreed to have a further search of the files made for it.

The cross-examination was then taken up by H. S. Bird, representing another group of protesting stockholders of the C. & O., who went over the figures relating to

stock purchases and exchanges of securities in an effort to show that they had been so arranged that the ones in which the Van Sweringens had the greatest interest would show the greatest profit. Mr. Van Sweringen denied the correctness of some of the figures and assumptions used and said he did not think that dollars had the same attraction for him that they have for some people but that, having all he needs for himself, he is now more interested in them as an "instrument of operation." When Mr. Bird asked him to express his opinion as to the value of Chesapeake & Ohio stock Mr. Baker objected, saying that that matter, under the terms of the plan, would very likely become a subject for arbitration. Mr. Van Sweringen reiterated his belief that the terms proposed are fair and said that if they were not he would be glad to have the commission prescribe terms that are just and reasonable, and to include in its order a provision for settlement with dissatisfied stockholders on the basis of the fair market value of their stock.

E. C. Bailly, representing the minority stockholders of the Hocking Valley, pressed Mr. Van Sweringen as to the matters taken under consideration in fixing the terms of exchange offered for the stock of that company. Mr. Van Sweringen refused to say just what specific considerations had been given weight but said the funded debt of the Hocking is very heavy in relation to its stock and in relation to that part of its property which he considered "really usable," the line from Columbus to Toledo. He said that part of the line would be valuable, although he would rather build a new one if it were not already there, but that 85 miles of the line is unproductive and he offered to sell it for $1 to any one who would assume its obligations, including that of furnishing service. Mr. Bailly's final question was as to the amount of the aggregate salary received by Mr. Van Sweringen as chairman of the Nickel Plate, Chesapeake & Ohio and Hocking Valley. He said he received none from the C. & O., nor Hocking and turned to a secretary as to his salary from the Nickel Plate, finally replying that it was $45,000.

On July 24 H. M. Griggs, manager of the Ore & Coal Exchange, took the stand and discussed the proposed unification in relation to coal traffic. He described the rapid growth of the Chesapeake & Ohio coal traffic, as compared with the smaller increase in its other traffic, to show that it is primarily a coal road, producing a much greater tonnage than can be marketed on its own line, and said that the proposed merger is not only desirable but necessary if the future coal traffic of the C. & O., is to be protected. He said it should be a part of a large system serving a great industrial district and that the lines in the Nickel Plate group are the only ones left serving such a territory which do not have a large producing territory on their own lines. Discussing the large increase in coal traffic from the non-union mines he said that it could not continue because unless wages are reduced in the union fields it will not be long before the miners' union is bankrupt and if no change is made in wages the railroads serving the old coal fields would reduce their rates in order to have some coal traffic to handle. On cross-examination Mr. Anderson tried to show that the merger would not create any new outlets for C. & O. coal and that the producers on its line will continue to hold their markets because of the better quality of their coal and because they would insist on meeting any change in conditions in the union fields.

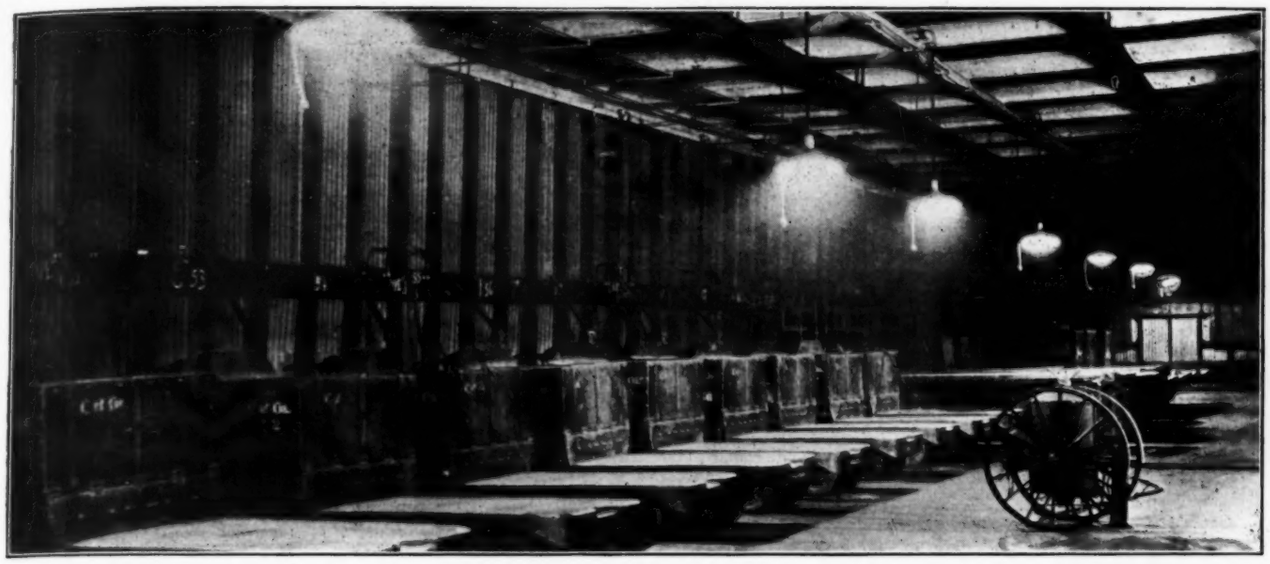
J. J. Bernet, president of the New York, Chicago & St. Louis, was recalled and submitted a revised estimate of the economies to be effected as a result of the unification, amounting to $6,068,434 annually. He also estimated a saving of $8,585,700 in capital expenditures. Mr. Bernet described some of the changes to be effected in detail and showed how excess capacity of some of the lines could be used by diverting freight from other routes that are now congested at times. He saad that between Marion and Columbus the Erie has excess capacity for 1,500 cars each way a day, because of its low grades and light passenger traffic. Mr. Bernet was cross-examined at length by Mr. Anderson on the various items of saving. When Mr. Bernet spoke of a conference of the presidents of the lines at which the estimates were considered Mr. Anderson asked if they did not hold a three-day conference in May at which it was decided to prepare so much data for presentation in this case that counsel for the opposition would not be able to go into it. He said he had information to that effect but Mr. Bernet said he was mistaken. Mr. Anderson then asked for the names of all those who had prepared the basic estimates so that he might call them as witnesses, and he conducted a detailed cross-examination in an effort to discredit the estimates. Mr. Bernet said that some of the possible savings from reduced accounting had not yet been realized in the case of the original Nickel Plate consolidation because of an agreement made by the Van Sweringens with Walter L. Ross, who representing the stockholders of the Clover Leaf at the time of the sale, providing for a separate accounting for a period of five years. This agreement he said had been modified and might be further modified if the unification plan is put into effect.

A. I. Stiles, an intervener, also cross-examined Mr. Bernet, who said he did not know just which 85 miles of the Hocking Valley Mr. Van Sweringen had in mind as being unproductive. Commissioner Meyer remarked that if he were interested in buying 85 miles for a dollar he could give him a list of several hundred miles of line that could be purchased on such terms by any one who would assume the responsibility of operation.

George W. Burpee, of Coverdale & Colpitts, consulting engineers, occupied the witness stand on July 27 and part of July 28, presenting a series of elaborate statistical exhibits regarding the valuations of the roads to be unified and respective their contributions to the proposed system and their financial structures. Mr. Anderson asked for time to study the exhibits before undertaking to cross-examine the witness on them, although he had been furnished copies in advance. He said he was anxious not to delay the hearing but he objected to being hurried unduly because Mr. Colston had not been willing to take an adjournment to allow him to go to California on some business and for some recreation. R. S. Marshall, assistant to the president of the Chesapeake & Ohio, also presented some statistical exhibits.

Cross-examination of Mr. Marshall was also postponed at Mr. Anderson's request and he was followed on July 29 by W. W. Colpitts, who gave some testimony supplemental to his former testimony. Prof. Emory R. Johnson of the University of Pennsylvania, expressed the opinion that the proposed unification plan would be in the public interest and consistent with paragraph 2 of section 5 of the law, and John E. Oldham, of Merrill, Oldham & Co., gave an additional statement discussing the reasons why he considered the plan in the public interest. Mr. Colston said that with the presentation of some accounting testimony he was rapidly approaching the conclusion of the Nickel Plate's case.

LIVESTOCK MARKETINGS in Canada during the past year were the best experienced for many years, according to the Department of Agriculture's report. There were 975,020 cattle, 355,179 calves, 3,094,291 hogs and 485,606 sheep marketed in 1924, as compared with 882,921, 315,422, 2,362,402 and 512,390, respectively, in the previous year.



Trucks on Charge in Charging Room No. 1

Electric Trucks in Transfer Service

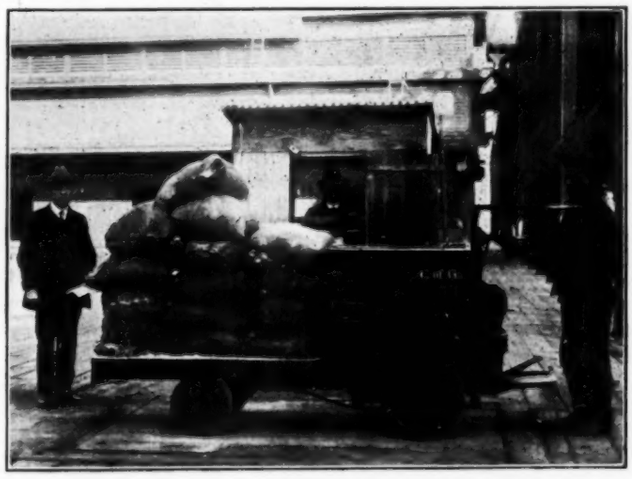
Central of Georgia now has fleet of 55 trucks operating at full capacity under trying conditions

THE fleet of electric trucks used by the Central of Georgia at Savannah, Ga., for transferring cargo from ships to cars and from ships to warehouse has recently been increased to 55. These trucks are

Repair Shop

operated throughout the year at practically maximum capacity.

The fleet is divided into two groups, one of which is used for handling nitrate of soda in bags and the other for cotton, news print paper and miscellaneous freight. Load carrying trucks are used exclusively and all trucks are equipped with Edison storage batteries. The trucks used for cotton and miscellaneous freight are six Elwell-Parker SA straight frame—a baggage type truck—and six IY special trucks similar to the straight frame type except that the platform is lower. Each of these trucks is equipped with a battery consisting of 32 A8 Edison cells. The trucks used for carrying nitre are ten Baker DLQ freight type trucks, each equipped with 24, A-10-H cells, 16 Elwell-Parker FB freight type trucks equipped with 21, A6 cells and 16 Elwell-Parker EG elevating platform trucks equipped with 20, A8 cells. The freight type trucks and the elevating platform trucks are similar in appearance and are used for the same service. At present the elevating platform trucks are simply used as freight



Truck on Scales en Route from Ship to Car

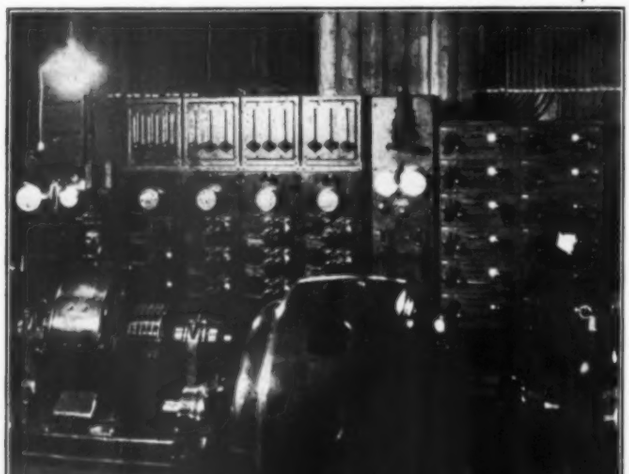
type trucks. A skid is placed on the platform and the elevating mechanism is not used.

Operation

The trucks are operated on five piers. Two of these piers have berths for three ships and three have two berths

each. There is room for more, but only 12 berths are used. Many of the ships operate on dispatch and it is important that they be unloaded quickly. Twenty-eight trucks are used when discharging five hatches, five being used on each of four hatches and eight on the hatch with longest haul. A port record was made, 3,050 tons of nitre being unloaded from a single ship in 10 hours. The nitre is taken out of the ship by the ship's booms and dropped on the trucks in loads consisting of from eighteen to twenty-one 160 lb sacks. From the ship's side the loaded truck is taken to the scales. The operator steps off the truck and the weigher takes the gross weight from which the weight of the truck is subtracted. Each truck of the same type is even weighted by means of lead adjusting weights carried in a small weight box mounted on the truck.

The truck proceeds from the scales to the car or the warehouse; it is unloaded by hand and is taken back empty to the ship's side. To reach two of the unloading platforms, the trucks must carry their load up a ramp which is 30 ft. long and has a 10 per cent grade. It is not uncommon to have 70 per cent of the cargo placed directly into cars and 30 per cent put in the warehouse.



Substation in Which Charging Current Is Generated

Usually each carload is a single consignment to a purchaser and accordingly cars may receive loads varying from 20,000 to 100,000 lb. A car hauled by a cable and motor-driven cable drum is used for switching and spotting cars along the loading platform. All of the truck operators are colored men.

The maximum distance the nitre trucks must travel is about 850 ft. and the minimum haul is about 300 ft. Each truck makes from 60 to 70 trips in a ten-hour day.

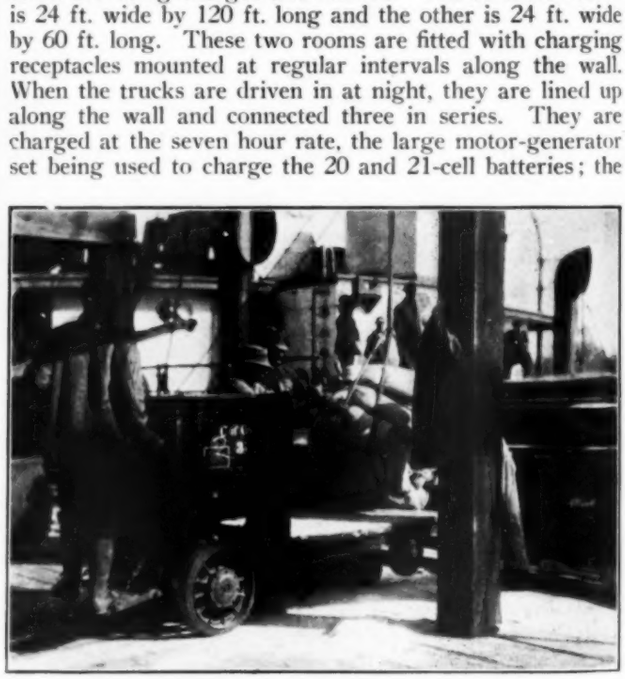
The service performed by the cotton trucks is similar in character except that the hauls are longer and there are no ramps to climb. The minimum haul is about 1,000 ft. and the maximum 3,000 ft.

The batteries on all trucks are charged every night. The charging station is located at Wadley street about half a mile from Berth 25 where most of the nitre trucks are used. At the conclusion of a day's work all of the trucks are run down to the Wadley street charging plant and are run back to the pier in the morning. Some of the trucks are used at the Wadley street berths.

The charging facilities occupy three rooms. One of these is 24 ft. square and contains a 150-kw. and a 75-kw. Westinghouse motor-generator set and the necessary switch gear. The charging current is generated at 125 volts and three sets of batteries are charged in series. The amount of charging current is regulated by Cutler-Hammer sliding rheostat panels.

The other two rooms house the trucks while the batteries are being charged and flushed. One of these rooms is 24 ft. wide by 120 ft. long and the other is 24 ft. wide by 60 ft. long. These two rooms are fitted with charging receptacles mounted at regular intervals along the wall. When the trucks are driven in at night, they are lined up along the wall and connected three in series. They are charged at the seven hour rate, the large motor-generator set being used to charge the 20 and 21-cell batteries; the voltage on the small set is boosted for charging the 24-cell batteries. The 32-cell batteries are charged two in series from the large motor-generator set. There are 24 charging circuits available.

Truck Entering Car with Load of Nitre—Note How Floor Planking Is Laid on Platform

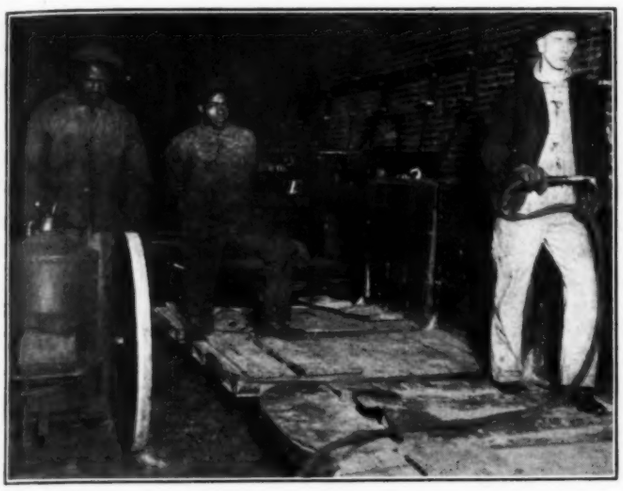


Truck Receiving Load from Ship's Boom

The A8 and the A6 batteries are flushed every night and the A1OH batteries are flushed every other night. The flushing device consists of a metal barrel or drum mounted on two wheels. An automobile tire pump is mounted on one side of the barrel. The barrel is filled partly full of distilled water and air pressure is applied by

the pump. Thirty feet of hose is connected to the barrel at the bottom and the other end of the hose is fitted with an Edison battery filler. The distilled water is made in a water still owned by the railroad.

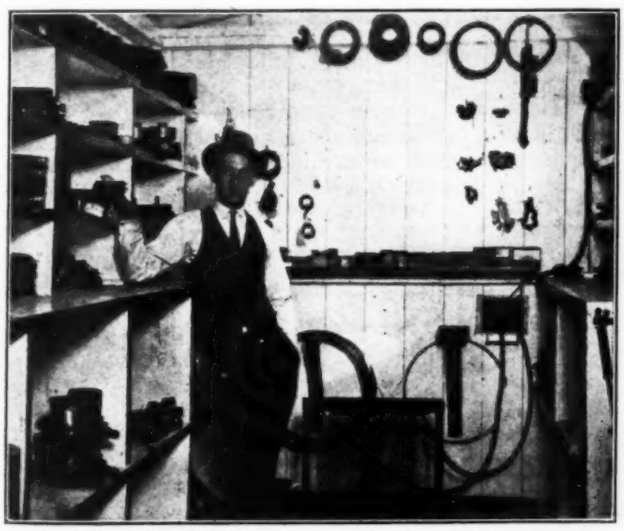
All of the trucks are fitted with Alemite lubrication, and



Truck Batteries Being Flushed in Charging Room No. 2

bearings are greased at intervals with a high pressure Alemite gun while the batteries are being charged.

The batteries on the type EG and FB trucks are also given a boosting charge of one hour at noon. This is done with a 25 kw. motor-generator set and two mercury arc rectifiers located in the repair shop near Berth 25. The



The Storeroom for Spare Truck Parts

other trucks do not need a boosting charge as they have larger batteries.

All repair work is done in a one-story building which measures 24 by 40 ft. Trucks which require a boosting charge are placed around this building during the noon hour at points where charging lines are brought out through the side wall. A 16-ft. addition at one side of the building provides additional working space when necessary and affords protection to trucks receiving a boosting charge in bad weather. A small addition not shown in the illustration is used as a storeroom for spare parts.

The workroom is equipped with a lathe, drill press, grinder, small belt driven air compressor for cleaning and painting, electric and acetylene welding facilities and bench and hand tools.

Batteries on the nitre trucks are cleaned and painted every six months at which time the solution or electrolyte is renewed where the gravity is found to be below standard. Batteries on the cotton trucks are cleaned and painted only once a year. The reason for the difference is that the nitrate of potash gets onto the batteries in spite of the precautions taken to prevent it.

Nitre truck batteries average from five to six years service before it is necessary to return them to the factory for recanning and reconditioning. The cotton truck batteries have shown an average life of about 10 years and a few of them have been in service 13 years. Batteries on the nitre trucks are at times transferred from one truck to another, but cotton truck batteries are never used on nitre trucks.

Rear bearing and steering knuckle repairs constitute a large part of the maintenance work done. This is due to corrosion caused by the nitre and by the dropping of heavy loads from the ship's boom to the truck. The maintenance work is done by a mechanic and two helpers and one mechanic and two helpers care for batteries.

The cost of handling material with the trucks has been found to be just about half the cost of doing the work with hand trucks, not including overhead or fixed charges. Including overhead, the saving effected is estimated at 30 per cent. The cost of maintaining and operating the trucks during the year ending July 31, 1924, including cost of charging current, labor of six maintainers, cost of renewals and 10 per cent for depreciation was $998. These costs are being gradually reduced month by month and the indications are that they will total only about $800 for the year ending July 1, 1925. This reduction has been effected principally by improved methods of maintenance and operation. New flooring was laid on the nitre piers recently and the planks were laid longitudinally instead of crosswise as they had been originally. This change reduced wear and tear on the trucks considerably.

The trucks are maintained and kept in running order by W. C. Black, electrical foreman, under the supervision of T. A. Johnson, electrical engineer.

Re-grading of Ties Affords Check on Field Inspection

IN order to bring about a more uniform grading of ties by field inspectors of the Reading and the Central of New Jersey, an interesting plan of checking their work has been put in service at the Port Reading creosoting plant of the above roads. This method includes a technical re-grading of a small part of each incoming shipment under conditions that permit of careful and accurate inspection. Through this plan the general tie inspector can keep close track of the grades and quality of tie timber accepted by each field man and purchased by the two roads, and is thus enabled to eliminate much of the variation of inspection and grading which usually result from various men working in different sections of the country. As a result of this check system the shipper or tie producer is insured of a more uniform inspection at all times, regardless of the inspector who may be doing the work, and is thus in a position to know at all times where he stands in relation to the requirements of the railroad.

A substantial proportion of the ties for the Reading

and the Central of New Jersey are Southern hardwoods and include white oak, red oak, pine and gum. These ties are transported to tidewater and shipped from various Southern ports by water to New York where they are usually reloaded onto barges and moved to the treating plant docks at Port Reading, N. J. There are two docks at this point, each with three standard gage tracks. The ties are picked up and loaded onto flat cars for distribution into the seasoning yard. For purposes of checking the fifth car off of every barge is diverted to a special section in the yard for re-grading. There is no particular purpose in taking the fifth car as any other car would serve the purpose equally well, but in order to facilitate the unloading and loading at the docks as well as to prevent possible confusion in switching and other operations, it was deemed expedient to have one particular car taken from each barge. The ties are loaded on this car just as they come from the barge, no attempt being made to secure a number of ties from each of the various grades.

Yard Inspection Is a Technical Re-grading

The re-grading is done on racks or skids set alongside one of the tie storage yard tracks. There are seven of these skids, each consisting of two 33-ft. rails supported at the ends by cribbing and spiked to standard gage. The top of the rail is about 30 in. above the ground. The ties are unloaded on these skids by a locomotive crane and, are slid into a position corresponding to that which they would occupy in the track except that they are placed much closer together. In placing the ties, they are turned so that the smallest or narrowest face is uppermost. This arrangement permits the inspector to see the full length of three sides of the tie and the fourth side as well if he desires to turn it.

When the ties are accepted by the field inspectors they are marked with a hammer on the ends with the letter R and a number corresponding to the inspector. One end inspection is used and the grade is indicated by the number of hammer marks made on the end of the tie. In shipping, this grade number is written on the end of the tie with crayon. In re-grading, the yard inspector passes down between each row of skids, checking with crayon those ties that are properly graded or marking on the proper grade according to his inspection. Approximately 200 ties are re-graded at a time. The results of each car are made up by him into a report to the general tie inspector. This report is by individual cars and shows the name of the shipper or shippers, the name of the lighter, the number of ties or switch ties and classification, the number degraded and their sizes, the general condition of the timber, the quality of grading and the field inspector's number.

Some Results of the Re-grading

Some random reports for June 1 and 2 of this year indicative of the quality of field grading that is now being obtained are presented below:

I

8	No. 5's to	No. 4's	Out of 174 No. 5's, 4's and 7-in. No. 3's.
6	No. 4's to 7-in.	No. 3's	
2 7-in.	No. 3's to	No. 2's	
12 6-in.	No. 3's to	No. 2's	Out of 34 No. 3's (6 x 8).
2 6-in.	No. 3's to	No. 1's	

30 ties degraded out of total of 208 ties on skids. This shipment all fresh cut ties. Mostly square hewn. Quality of timber generally O. K. Grading fair. Oak switch timber all fresh cut but split or checked more or less on ends. Inspected by—

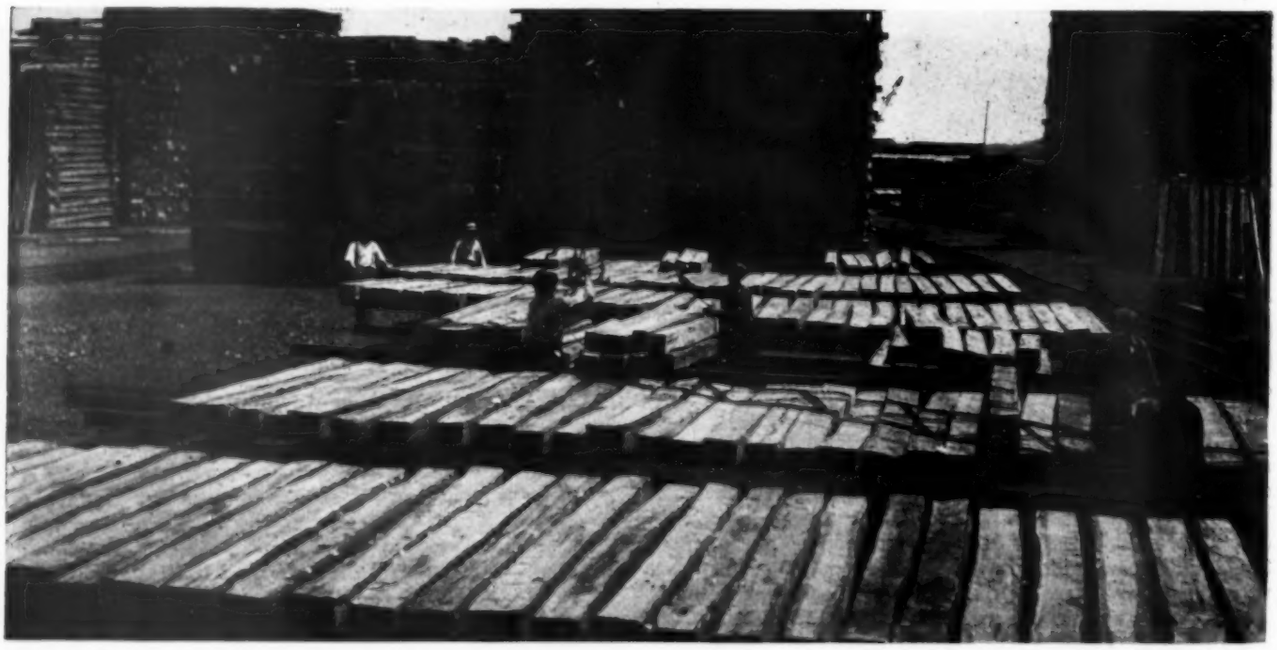
II

4	No. 4's to 7-in.	No. 3's	Out of 89 No. 5's, 4's and 7-in. No. 3's.
5	No. 2's to	No. 1's	Out of 101 No. 1's and 6-in. 2's.
4	No. 1's to	Rejects	

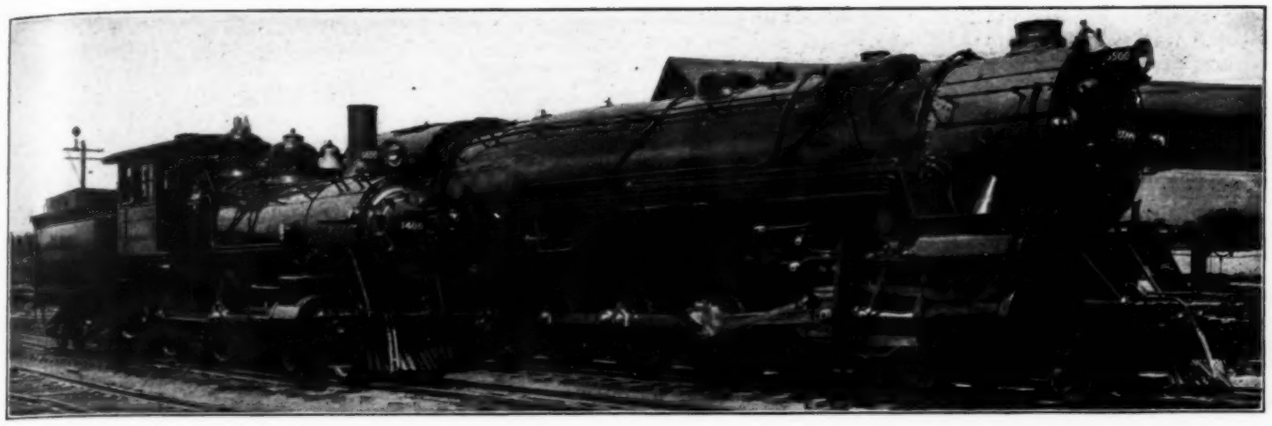
13 ties degraded out of total of 190 ties on skids. Cargo of square and round ties. Dry and green stock. Quality and grading of timber in general is good. Inspected by—

Other reports showed proportions of degraded ties to total ties on skids similar to the first two given. Following this yard inspection, the ties are re-loaded for distribution in the yard for seasoning.

This method of re-grading samples of the incoming shipments to promote a more uniform inspection of ties in the field was put in operation at the Port Reading creosoting plant under the general direction and supervision of J. D. Landis, purchasing agent, and C. M. Taylor, superintendent, to whom we are indebted for the information contained in this article.



The Ties Are Unloaded by Cranes and Placed in the Same Position Relative to the Rail That They Will Occupy When in Track



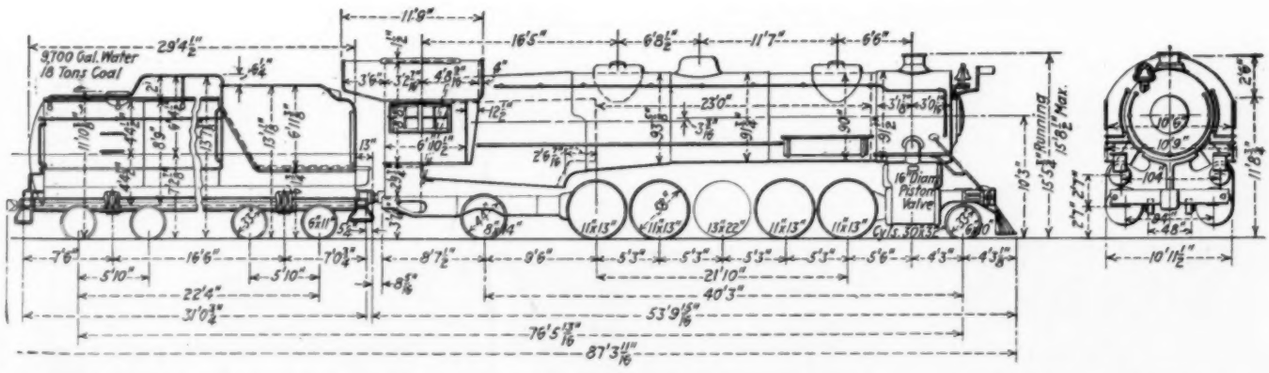
An Old Locomotive Beside the New Mountain Type Recently Completed at the Mt. Clare Shops, Baltimore, Md., by the Baltimore & Ohio

Santa Fe Type Locomotive Converted to 4-8-2

Rebuilt by the B. & O. to haul heavy passenger trains over the mountain divisions between Washington and Pittsburgh

THE Baltimore & Ohio has recently completed a new Mountain type locomotive, known as Class T, at its Mt. Clare shops, Baltimore, Md. This locomotive is designed for heavy passenger train operation over the mountain divisions between Washington, D. C., and Grafton, W. Va., and Washington and Pittsburgh, Pa. It was rebuilt from a Santa Fe type locomotive known as Class S. The actual design was started about the first of this year and it required only 30 working days to complete the work of construction, the work being started May 16, 1925, and completed June 20. The design includes a number of modern appliances such as the Ragonnet type "B" power reverse gear, air operated cylinder cocks, Duplex stoker, compound air pumps, etc. It develops a tractive force of 65,000 lb. which is calculated to be sufficient to haul 12 passenger cars over the steep mountain grades and eliminates the necessity of using helper locomotives.

Few of the old parts of the Class S locomotive were used in the construction of the new locomotive. However, a number of new parts for the Class T locomotive were made to the same design and interchangeable with those used on the Class S. Such major parts as the cylinders, frames, wheels, main and side rods, guides, etc., are entirely of new design.



Elevation of the Santa Fe Type Locomotive Which Was Rebuilt Into a Mountain Type by the Baltimore & Ohio

With the exception of lengthening the combustion chamber of the boiler from 30 7/16 in. to 48 9/16 in. and raising the steam pressure from 180 lb. to 210 lb., there were very few changes made in the boiler. Referring to the comparative table of dimensions, weights and proportions, it will be noted that practically all of the principal boiler dimensions are the same. Some of the ratios, however, differ because of the increase in boiler pressure. A Duplex stoker was substituted for the Street stoker on the older locomotive.

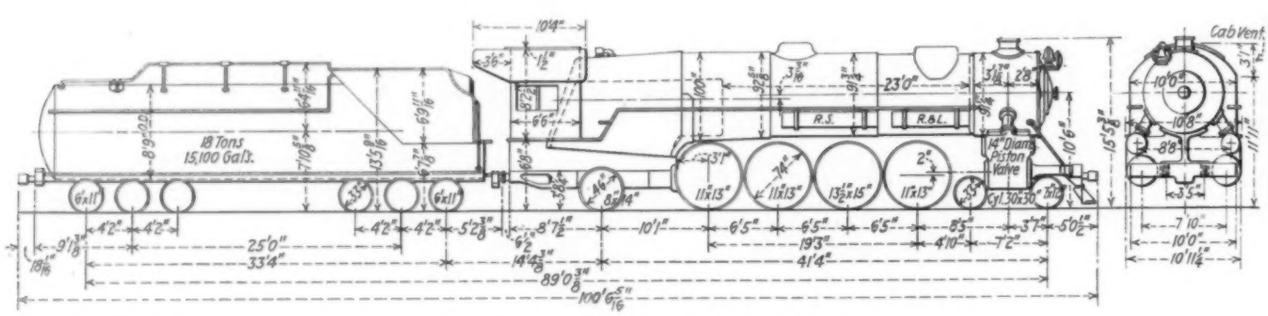
As would be expected, the radical changes occurred in

the design of the running gear. The length of the piston stroke was reduced from 32 in. to 30 in. and the valve gear was changed from Walschaert to Baker, which necessitated the application of new cylinders. The valve has a maximum travel of seven inches, the outside lap is 1⅛ in. with a ½-in. lead in full gear. The exhaust clearance is 3/16 in. with an 88-per cent cut-off in full gear. The new Mountain type locomotive has 33-in. engine truck wheels, which are the same as the Class S, 74-in. drivers and 46-in. trailer wheels.

The tenders for the Class S and Class T locomotives are both of the Vanderbilt type. It will be noted, however, from the drawings that the water capacity for the class T has been increased from 9,700 gal. to 15,100 gal. and the wheel base has been lengthened from 22 ft. 4 in. to 33 ft. 4 in. The tender for the new Mountain type is equipped with six-wheel trucks.

The design for this locomotive was prepared complete in the mechanical engineer's office of the Baltimore & Ohio, under the personal supervision of Col. George H. Emerson, chief of motive power and equipment and all the construction work was performed by the employees of the company at the Mt. Clare shops.

	Class T	Class S
Total engine	400,000 lb.	407,060 lb.
Tender	259,300 lb.	178,400 lb.
Wheel bases:		
Driving	19 ft. 3 in.	21 ft. 0 in.
Total engine	41 ft. 4 in.	40 ft. 3 in.
Total engine and tender	89 ft. 0 in.	76 ft. 5⅛ in.
Wheels, diameter outside tires:		
Driving	74 in.	58 in.
Front truck	33 in.	33 in.
Trailing truck	46 in.	44 in.
Boiler:		
Type	Ext. wagon top	Ext. wagon top
Steam pressure	210 lb.	180 lb.
Fuel, kind	Bit. coal	Bit. coal
Diameter, first ring, inside	90 in.	90 in.
Firebox, length and width	132¼ in. by 96 in.	132¼ in. by 96 in.
Combustion chamber length	48⅞ in.	30⅞ in.
Tubes, number and diameter	269—2¼ in.	269—2¼ in.
Flues, number and diameter	48—5½ in.	48—5½ in.
Length over tube sheets	23 ft. 0 in.	23 ft. 0 in.
Grate area	89.17 sq. ft.	89.17 sq. ft.
Heating surfaces:		
Firebox, comb. chamber and arch tubes	383 sq. ft.	323 sq. ft.
Tubes and flues	5,208 sq. ft.	5,208 sq. ft.
Total evaporative	5,591 sq. ft.	5,531 sq. ft.
Superheating	1,305 sq. ft.	1,305 sq. ft.
Comb. evaporative and superheating	6,896 sq. ft.	6,836 sq. ft.
Tender:		
Style	Vanderbilt	Vanderbilt



Elevation of the Mountain Type Locomotive

COMPARATIVE TABLE OF DIMENSIONS, WEIGHTS AND PROPORTIONS

	Class T	Class S
Railroad	B. & O.	B. & O.
Builder	B. & O.	Baldwin
Type of locomotive	4-8-2	2-10-2
Service	Passenger	Freight
Cylinders, diameter and stroke	30 in. by 30 in.	30 in. by 32 in.
Valve gear, type	Baker	Walschaert
Valves, piston type, size	Piston, 14 in.	Piston, 16 in.
Weights in working order:		
On drivers	275,000 lb.	330,560 lb.
On front truck	62,000 lb.	23,160 lb.
On trailing truck	63,000 lb.	53,340 lb.
Water capacity	15,100 gals.	9,700 gals.
Fuel capacity	18 ton	18 ton
General data estimated:		
Rated tractive force, 85 per cent	65,000 lb.	75,970 lb.
Factor of adhesion	4.23	3.94
Cylinder horsepower (Cole)	3,406 hp.	2,920 hp.
Weight proportions:		
Weight on drivers ÷ total weight engine, per cent	68.75	82.4
Weight on drivers ÷ tractive force	4.23	4.36
Total weight engine ÷ cylinder hp.	117.4	139.3
Boiler proportions:		
Comb. heat. surface ÷ cylinder hp.	2.02	2.34
Tractive force ÷ comb. heat. surface	9.44	11.1
Tractive force × dia. drivers ÷ comb. heat. surface	699	645
Cylinder hp. ÷ grate area	38.2	32.75

Great Northern Stores Officers and Wives at the Recent Annual Convention of Their System Association at Superior, Wis.

General News Department

The Interstate Commerce Commission has extended from July 1, 1925, to January 1, 1926, the time in which the Erie may complete its installation of automatic train control as required by the commission's order of June 13, 1922.

The Boston & Albany and the Pittsburgh & Lake Erie have asked the Interstate Commerce Commission for relief from the commission's automatic train control order until the result of operation of installations on other parts of the New York Central system have been determined.

The Atlanta & West Point, the Western Railway of Atlanta and the Georgia Railroad, all under the same control, have contracted with the Prudential Insurance Company of America for group life insurance for their employees, about 5,000 in all. The aggregate insurance is about $12,000,000.

A series of slight earthquakes, following the more severe ones which blocked the lines of the Northern Pacific and the Chicago, Milwaukee & St. Paul in the vicinity of Lombard, Mont., in June, have caused a number of minor landslides which have encroached upon the railway. By working a steam shovel 24 hours a day, the St. Paul has just completed the cleaning up of its line. The line has been kept open for trains at all times except for a few days following the severe earthquakes.

The group life insurance contract of the Southern Pacific which was first put into effect in 1923, has now been amended to include the 2,200 employees of the San Antonio & Aransas Pass, which road has been acquired by the Southern Pacific. The total amount of insurance now covered by this contract is said to be 145 million dollars, and the total number of employees insured is about 90,000. The Metropolitan Life Insurance Company, the insurer under this contract, carries on various educational activities among the insured, independently of the railroad company.

Cook County Appoints Grade Crossing Commission

A grade crossing commission composed of representatives of steam and electric railways in Cook county, Ill., has been organized at the suggestion of the president of the county board. The commission is to make a survey of the county in order to formulate recommendations for better protection at dangerous grade crossings; to recommend automatic signals at crossings where they may be needed; to co-operate with county officers in drawing up safety regulations, and in compelling the removal of obstructions adjacent to railway rights-of-way which obscure the view of drivers on approaching the grade crossings.

Tool Foremen's Association to Meet in Chicago

The American Railway Tool Foremen's Association will hold its thirteenth annual convention at the Hotel Sherman, Chicago, on September 2, 3 and 4. H. T. Bentley, general superintendent of motive power of the Chicago & North Western, will deliver the opening address. G. T. Martin, assistant to the general superintendent of motive power of the Chicago, Milwaukee & St. Paul, will speak on "The Tool Foreman's Responsibilities," and E. L. Woodward, western mechanical editor of the *Railway Age,* will present a paper on "The Importance of the Toolroom." Committee reports will deal with the following subjects: Standardization of tools in the locomotive and car shops; grinding in the railroad shops; jigs and devices for locomotive and car shops; forging machine dies; machine tool equipment for the toolroom, and economies possible by standardized small tools. An exhibit of machine and hand tools in connection with the convention will be displayed by the Supply Association of the American Railway Tool Foremen's Association.

Flood Damages Colorado Roads

Railroads in the vicinity of Trinidad, Colo., were considerably damaged by a flood which developed following a series of cloudbursts on July 22. One span of the Atchison, Topeka & Santa Fe bridge at Jansen, Colo., three miles west of Trinidad, was washed out, as was a part of the Trinidad yard. The passenger station and the Fred Harvey hotel were surrounded by water. The Denver & Rio Grande Western lost one of its bridges and several hundred feet of track in Trinidad. Two bridges of the Colorado & Wyoming, a subsidiary of the Colorado Fuel & Iron Company, were also destroyed. Many trains were delayed by the storm and the damage to the tracks.

Expect No Early Decision in Canadian Rate Case

The Board of Railway Commissioners at Ottawa has announced that the Canadian Pacific has in pursuance to its order withdrawn the westbound Crow's Nest Pass Agreement rates on the commodities specified in that pact, but that that road had made no change in the rates on grain moving eastward under the Agreement.

Following the board's public notification a few days ago that shippers, as individuals and as organizations, would have until August 15 next to make their submissions regarding alleged discriminations in rates in different sections of the country those who have been most active in agitations against high rates or discrimination are busy preparing their cases. Premier John Oliver of British Columbia has named G. G. McGeer, a Vancouver lawyer, to present that province's case. The three maritime provinces have agreed to name a rate expert and have a case submitted to Ottawa before August 15.

Chairman H. A. McKeown of the board stated in St. John, N. B., last week that he did not expect any action would be taken on these various submissions and complaints before fall. "There are so many questions to be settled regarding grievances which all provinces of the Dominion might have against the railways that we, as a board, will take them up one by one and give what appear to us to be the most important and most imminent our earliest consideration."

Flashing Light Signals at Highway Crossings in Pennsylvania

The Public Service Commission of Pennsylvania has issued a circular announcing its approval of the action of the Department of Highways, of that State, in prescribing rules for the installation of lights on the highways approaching grade crossings of railroads.

The agreement, covering these rules, which is between the Department of Highways and "such steam railroad companies as may become parties to it," applies only to the "primary system" of state highways. The crossings are divided into two classes (1) where the traffic on the highway is such that automobiles may conveniently be stopped and (2) where stopping would cause congestion. For the first class the state is to erect stop signs, one on each side of the railroad, equipped with two horizontally arranged flashing lights, flashing together, not alternately. The railroad bears half the cost of installation and the state the other half; and the Department of Highways will operate and maintain.

At the second class of crossings, the railroad is to erect the signal, which is to conform to the A. R. A. standard. It must be a wig-wag or alternately-flashing red lights, arranged horizontally, the signal to be actuated by the approach of a train. The first cost is to be divided as stated above, but the railroad is to operate and maintain.

The agreement prescribes details of installation. It calls for an additional cautionary yellow flashing light where the principal signal can not be seen 500 ft.

It is proposed also to erect such yellow lights where, because

of the separation of grades of the highway and the railroad, the curve in the highway becomes dangerous. Here also the railroad is to pay one-half the cost of installation.

The use of standard approach sign s is to be continued.

The Public Service Commission gives its approval with various reservations; the primary responsibility of railroad companies must not be diminished, these lights must not be substituted for higher standards of protection, and the commission must have notice of proposed installations.

New Freight Cars Placed in Service

A total of 83,291 freight cars was placed in service during the first six months of 1925 by Class I railroads, according to a statement issued by the Car Service Division of the A. R. A. This was an increase of 12,417 cars as compared with the number installed in the corresponding period of last year and an increase of 4,051 cars as compared with 1923. The total included 43,627 box cars, 29,504 coal cars and 3,382 refrigerator cars. There was, however, a substantial reduction in the number of new freight cars on order on July 1, to 28,197, as compared with 60,315 last year and 96,855 in 1923.

Class I railroads during the first half of 1925 also placed in service 927 steam locomotives, compared with 1,071 during the same period last year and 1,998 during the same period in 1923. The same roads on July 1, 1925, had 279 locomotives on order compared with 360 on the same day last year and 1,902 two years ago.

The figures as to cars and locomotives include new, rebuilt and leased equipment.

The average capacity of the freight cars owned by the Class 1 railroads on July 1 this year was 44.56 tons, as compared with 43.88 tons on the same date last year, or an increase of 1.5 per cent. The average tractive power per locomotive on July 1 this year was 40,215 pounds, as compared with 39,571 pounds on the same date last year, or an increase of 1.6 per cent.

Alberta Considering New Lease for Edmonton, Dunvegan & British Columbia

The Alberta Legislature has been reconvened by Premier Herbert Greenfield for August 3 to consider the question of the releasing of the Edmonton, Dunvegan & British Columbia, which line is owned by that province but has been operated by the Canadian Pacific. That road was leased five years ago to the Canadian Pacific. The lease expired on July 20 last with neither the Alberta government, the lessor, nor the Canadian Pacific Railway, the lessee, having given any expression of intention thereto. The mileage of the road is about 400. It runs from Edmonton in a northwesterly direction to Grand Prairie in the fertile Peace river country.

It is believed that both the Canadian Pacific and Canadian National are desirous of obtaining a lease of the Dunvegan line, and it is just possible, too, that either or both roads may consider the idea of purchasing the road outright from the Alberta government, the owner.

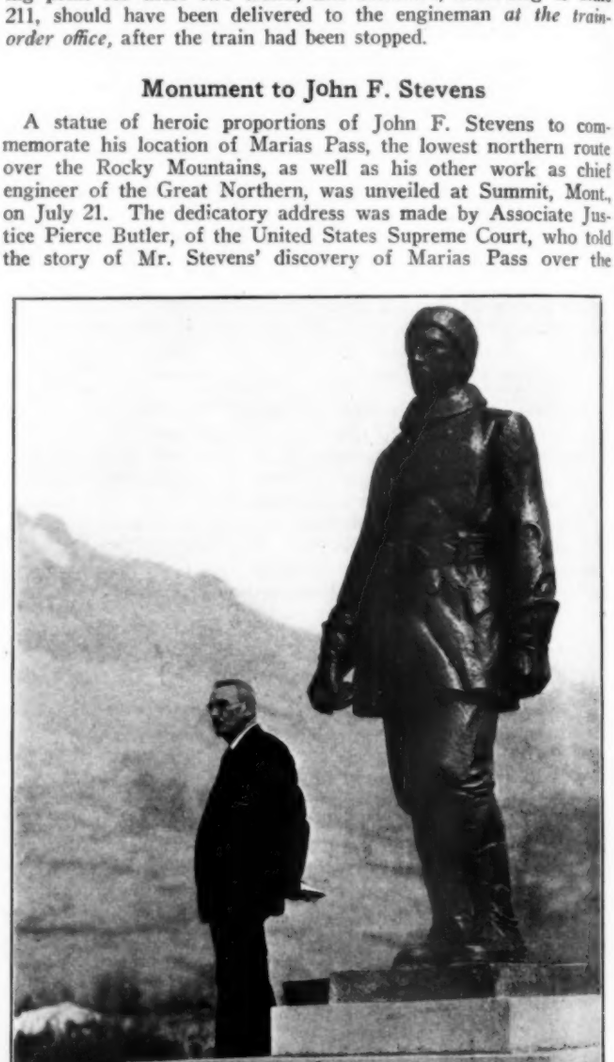
In the event of the Canadian National getting control of the line, either through a lease or purchase, it is said to be probable steps will be taken toward building a link from the Peace river terminus of the Dunvegan line in a southwesterly direction to connect again with the main line of the Canadian National running to Vancouver and other Pacific Coast points. Such a line, if built, would make the Peace river line a loop instead of a dead-end branch.

Report on Collision at Glenville, Minn.

W. P. Borland, director of the Bureau of Safety, has made his report to the Interstate Commerce Commission on a collision at Glenville, Minn., on the Chicago, Rock Island & Pacific, on February 8, when a westbound freight train of the Rock Island collided with an eastbound passenger train of the Minneapolis & St. Louis, resulting in the injury of one passenger, two mail clerks, and three trainmen. The collision occurred at 3:10 a. m. when there was a dense fog, and was due to the failure of the engineman of the freight to wait at the Glenville station, according to a dispatcher's order which he had received. A contributing cause was the failure of the station operator to wait, according to rule, until the freight train came to a stop before delivering to the engineman five train orders. Manual block signal rules are in effect on this line. At a post, 607 ft. west of the station, all westbound trains are required to come to a full stop, this being the approach to a junction with the Illinois Central; and the explanation of the operator for his action in delivering the orders (by hoop) without requiring the train first to be stopped, was that he saw that the engineman was going to make a good stop at the post. The engineman, however, *assumed*, because the orders were handed to him by means of the hoop, that they would extend farther west his right against the opposing train; and, therefore, as soon as he had stopped at the post he immediately proceeded; and had run but a short distance before meeting the other train. One baggage car was crushed at one end and one freight car was wrecked. One of the five orders delivered at Glenville was a copy of the one which made Glenville the meeting point for these two trains, and therefore, according to Rule 211, should have been delivered to the engineman *at the train-order office*, after the train had been stopped.

Monument to John F. Stevens

A statue of heroic proportions of John F. Stevens to commemorate his location of Marias Pass, the lowest northern route over the Rocky Mountains, as well as his other work as chief engineer of the Great Northern, was unveiled at Summit, Mont., on July 21. The dedicatory address was made by Associate Justice Pierce Butler, of the United States Supreme Court, who told the story of Mr. Stevens' discovery of Marias Pass over the mountains. Mr. Stevens himself attended the dedication of the monument in his honor.



John F. Stevens and the Bronze Statue Dedicated to Him at Summit, Mont.

The dedication of the Stevens monument was one of four occasions during the week of July 16, in which the Upper Missouri Historical Exposition, sponsored by the Great Northern, commemorated a series of epochal events in the progress of pioneers toward the Pacific coast. The exposition, conducted under the auspices of the historical societies of Montana and North Dakota,

included the governors of those states as well as Ralph Budd, president of the Great Northern, C. O. Jenks, vice-president in charge of operation, and W. P. Kenney, vice-president and director of traffic. The party was provided with a special train by the Great Northern. The first stop was made at Verendrye, N. Dak., where a granite globe, presented by the railway company, was dedicated to the memory of David Thompson, a British explorer, who made the first comprehensive survey of the territory. A column of granite, a monument to Captain Lewis of the Lewis and Clark expedition, was dedicated at Meriwether, Mont.

Traffic and Earnings in Canada for May and First Five Months

Canadian National freight and passenger traffic continued lighter in May this year than in the same month last year and revenues were less by $897,518 or 7.6 per cent for freight and $208,032 or 8.3 per cent for passenger, the total being $1,343,830 or 8.1 per cent under total revenues for May, 1924. Operating expenses were reduced by $1,585,994 or 9.4 per cent, the largest reduction being $1,009,622 or 12.8 per cent in transportation expenses. The cut in the total pay roll was $976,136 for a reduction of 6,963 in the average number of employees. The average load per freight car was 22.4 tons as against 25.5 tons for May last year. The average haul was also shorter by 79.6 miles and the average receipt per ton mile was increased from .921 cent to 1.180 cents or 28 per cent. Although the average train loading was less by 58.4 revenue tons, the earnings per train mile were greater by 66 cents or 13 per cent. The falling off in passenger traffic, however, reduced also the average revenues per passenger train mile by 24 cents or 10 per cent. Although the Canadian lines showed an operating deficit of $191,731 the United States lines showed substantial net revenues, giving a surplus for the entire system of $399,939. The net revenue of the Grand Trunk Western, $644,624, has been exceeded only twice since the beginning of 1924, namely, in March and September of last year. The net operating revenues for January to May this year showed an increase over the same period in 1924 for Canadian lines of $380,387 and for the United States lines of $238,522.

CANADIAN NATIONAL SYSTEM

(Steam Lines in Canada and United States)

For the Month of May, 1925-1924

	1925	1924
Operating Revenues	$18,245,738.00	$19,350,770.00
Operating Expenses	17,845,798.23	19,606,092.82
Net Operating Revenues	399,939.77	255,322.82
Operating Income	Cr. 97,796.62	Dr. 697,634.70

SUMMARY

Five Months Ended May 31

CANADIAN NATIONAL RAILWAY

	1925	1924
Operating Revenues	$87,339,081.00	$95,184,491.00
Operating Expenses	83,164,359.05	91,628,678.13
Net Operating Revenue	4,174,721.95	3,555,812.87
Operating Income	4,164,206.55	2,910,502.63

Canadian Pacific gross revenues for May this year showed a decrease from those of May last year of $1,871,184 or 13.1 per cent. Freight revenues declined $1,549,872 or 16.2 per cent for a reduction in the freight traffic of 26.4 per cent and passenger receipts were less by $233,686, or 8.7 per cent, for a reduction of 5.3 per cent in passenger traffic. Operating expenses were reduced by $1,139,369 or 9 per cent, reductions being made in maintenance of way and structures of $407,546, or 12.7 per cent, in maintenance of equipment of $263,200, or 10 per cent, and in transportation expenses of $477,243, or 8.5 per cent. The reduction in the total pay roll was $296,489, or 3.8 per cent. Freight cars were loaded lighter on an average of 3.5 tons so that freight trains with 0.7 more loaded cars and 1.2 less empties carried 94.8 tons less of revenue freight and earnings were reduced 38 cents per train mile. The cumulative totals for January to May show a decrease from 1924 in gross revenues of $7,356,577 and in net revenues of $1,228,264. The net revenues, however, were $254,398 more than in the same period in 1924.

Operating revenues of the Canadian Pacific for the five months of this year (January to May) were $60,878,938, as compared with $68,235,515 in the same period last year; operating expenses $55,000,533, as compared with $61,128,845; net operating revenues, $5,878,405, as compared with $7,106,669, and operating income, $6,213,195, as compared with $7,930,435. For the month of May this year operating revenues totalled $12,384,855, as compared with $14,256,039 in the same month last year; operating expenses, $11,487,309, as compared with $12,626,678; net operating revenues $897,546, as compared with $1,629,361, and operating income $908,913, as compared with $1,726,469.

P. R. R. Women's Aid

The Women's Aid of the Pennsylvania Railroad System has made great progress during the past year. The annual report, just issued by Mrs. W. W. Atterbury, director, shows a total membership of 184,766, a gain during the year of 67,743 members, or 58 per cent. The Women's Aid has now somewhat better than nine members for every ten employees in the divisions and departments covered by its work. This organization consists of women employees of the road and the wives, daughters, mothers and sisters of the men in the service. Every grade and rank is represented, and the work was extended last year to embrace every operating division on the road.

The records of 1924 show that 18,984 families were visited, an increase of over 3,000 as compared with the previous year. Assistance was given, where needed, in the form of medical or surgical attention, food, clothing, coal and money; while flowers, fruits and other delicacies were carried to the sick and injured. The total amount disbursed in rendering aid was nearly $80,000, all raised by the dues and voluntary contributions of the members and the holding of subscription dances and entertainments. Over 1,000 Christmas baskets were furnished to families in their homes.

The Eastern Region membership rose to 95,419, equal to more than one member for every employee. In the Central Region, the Women's Aid work was extended to all divisions and the membership rose to 54,486. In the Northwestern Region, membership increased 20 per cent. In the Southwestern Region, it was brought above the 11,000 mark. The Aid has now completed its fifth year. It was originally organized in November, 1917, under the name of the "Pennsylvania Railroad Women's Division for War Relief," to care for the home interest of employees who were serving in the American military forces during the World War.

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings.

AIR BRAKE ASSOCIATION.—F. M. Nellis, 165 Broadway, New York City. Next convention, May 4-7, 1926, New Orleans, La. Exhibit by Air Brake Appliance Association.

AIR BRAKE APPLIANCE ASSOCIATION.—John B. Wright, Westinghouse Air Brake Co. Meeting with Air Brake Association.

AMERICAN ASSOCIATION OF ENGINEERS.—H. Almert, 63 E. Adams St., Chicago. Next convention, June, 1926, Philadelphia, Pa.

AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—Grant Williams, 1341 Railway Exchange, Chicago.

AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. L. Duncan, 332 So. Michigan Ave., Chicago. Next meeting, June 1, 1926, Atlantic City, N. J.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York. Next meeting, October 29-30, 1925, New Orleans, La.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—J. Rothschild, Room 400, Union Station, St. Louis, Mo. Next convention, June 15-18, 1926, Montreal, Quebec, Canada.

AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.—C. H. Shircliffe, Chicago & North Western Ry., Chicago. Annual meeting, October 6, Hotel Statler, St. Louis, Mo.

AMERICAN ELECTRIC RAILWAY ASSOCIATION.—J. W. Welsh, 292 Madison Ave., New York. Annual convention, October 5-9, 1925, Atlantic City, N. J.

AMERICAN RAILROAD MASTER TINNERS', COPPERSMITHS' AND PIPE FITTERS' ASSOCIATION.—C. Borcherdt, 202 North Hamilton Ave., Chicago, Ill.

AMERICAN RAILWAY ASSOCIATION.—H. J. Forster, 30 Vesey St., New York, N. Y.

Division I.—Operating—J. C. Caviston, 30 Vesey St., New York.

Freight Station Section (including former activities of American Association of Freight Agents).—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago Ill.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York.

Protective Section (including former activities of the American Railway Chief Special Agents and Chiefs of Police Association).—J. C. Caviston, 30 Vesey St., New York, N. Y.

Safety Section.—J. C. Caviston, 30 Vesey St., New York.

Telegraph and Telephone Section (including former activities of the Association of Railroad Telegraph Superintendents).—W. A. Fairbanks, 30 Vesey St., New York. Next meeting, October 27-29, 1925, Hotel Roosevelt, New Orleans, La.

Division II.—Transportation (including former activities of the Association of Transportation and Car Accounting Officers).—G. W. Covert, 431 South Dearborn St., Chicago, Ill.

Division III.—Traffic, J. Gottschalk, 143 Liberty St., New York.

Division IV.—Engineering, E. H. Fritch, 431 South Dearborn St., Chicago, Ill. Annual convention, March 9-11, Chicago. Exhibit by National Railway Appliances Association, March 8-11.

Construction and Maintenance Section.—E. H. Fritch.
Electric Section.—E. H. Fritch.
Signal Section (including former activities of the Railway Signal Association).—H. S. Balliet, 30 Vesey St., New York, N. Y. Next meeting, Sept. 29 to Oct. 1, West Baden Springs Hotel, West Baden, Ind.

Division V.—Mechanical (including former activities of the Master Car Builders' Association and the American Railway Master Mechanics' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago, Ill. Exhibit by Railway Supply Manufacturers' Association.

Equipment Painting Section (including former activities of the Master Car and Locomotive Painters' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago, Ill. Next meeting, September 15-17, 1925, St. Paul Hotel, St. Paul, Minn.

Division VI.—Purchases and Stores (including former activities of the Railway Storekeepers' Association).—W. J. Farrell, 30 Vesey St., New York, N. Y.

Division VII.—Freight Claims (including former activities of the Freight Claim Association).—Lewis Pilcher, 431 South Dearborn St., Chicago, Ill.

Car Service Division.—C. A. Buch, 17th and H Sts., N. W., Washington, D. C.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, C. & N. W. Ry., 319 N. Waller Ave., Chicago. Next convention, October 20-22, 1925, Buffalo, N. Y. Exhibit by Bridge and Building Supply Men's Association.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—A. L. Moorshead, Industrial Engineer, Erie R. R., New York, N. Y.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—(Works in co-operation with the American Railway Association Division IV.) E. H. Fritch, 431 South Dearborn St., Chicago. Annual convention, March 9-11, Chicago. Exhibit by National Railway Appliances Association.

AMERICAN RAILWAY MASTER MECHANICS' ASSOCIATION.—(See American Railway Association, Division V.)

AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—G. G. Macina, C. M. & St. P. Ry., 11402 Calumet Ave., Chicago. Annual convention, September 2-4, 1925, Hotel Sherman, Chicago. Exhibit by Supply Association of the American Railway Tool Foremen's Association.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—T. F. Whittelsey, 1319-21 F St., N. W., Washington, D. C.

AMERICAN SOCIETY FOR STEEL TREATING.—W. H. Eisenman, 4600 Prospect Ave., Cleveland, Ohio. Annual convention, week of September 14, 1925, Cleveland, Ohio.

AMERICAN SOCIETY FOR TESTING MATERIALS.—C. L. Warwick, 1315 Spruce St., Philadelphia, Pa.

AMERICAN SOCIETY OF CIVIL ENGINEERS.—29 W. 39th St., New York. Regular meetings 1st and 3rd Wednesday in month, except July and August, 33 W. 39th St., New York.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—Calvin W. Rice, 29 W. 39th St., New York. Railroad Division, A. F. Stuebing, Chief Engineer, Bradford Draft Gear Co., 23 W. 43rd St., New York.

AMERICAN TRAIN DISPATCHERS' ASSOCIATION.—C. L. Darling, 10 East Huron St., Chicago, Ill.

AMERICAN WOOD PRESERVERS' ASSOCIATION.—E. J. Stocking, 111 West Washington St., Chicago. Next convention, January 26-28, 1926. Cleveland, Ohio.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—H. D. Morris, District Claim Agent, Northern Pacific Ry., St. Paul, Minn. Annual meeting, May, 1926, Los Angeles, Calif.

ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.—Jos. A. Andreucetti, C. & N. W., Room 411, C. & N. W. Sta., Chicago. Annual meeting, October 27-30, Hotel Sherman, Chicago. Exhibit by Railway Electrical Supply Manufacturers' Association.

ASSOCIATION OF RAILWAY EXECUTIVES.—Stanley J. Strong, 17th and H Sts., N. W., Washington, D. C.

ASSOCIATION OF RAILWAY SUPPLY MEN.—E. E. Thulin, Peoples Gas Bldg., Chicago. Meeting with International Railway General Foremen's Association.

ASSOCIATION OF RAILWAY TELEGRAPH SUPERINTENDENTS.—(See American Railway Association, Division I.)

ASSOCIATION OF TRANSPORTATION AND CAR ACCOUNTING OFFICERS.—(See American Railway Association, Division II.)

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—B. J. Wilson, Pocket List of Railroad Officials, 1428 Lytton Bldg., Chicago. Meeting with American Railway Bridge and Building Association.

CANADIAN RAILWAY CLUB.—C. R. Crook, 129 Charron St., Montreal, Que.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—Aaron Kline, 626 North Pine Ave., Chicago. Regular meetings, 2nd Monday in month, except June, July and August, Great Northern Hotel, Chicago.

CAR FOREMEN'S ASSOCIATION OF LOS ANGELES.—J. W. Krause, 514 East Eighth Street, Los Angeles, Calif. Regular meetings, second Friday of each month, 514 East Eighth Street, Los Angeles.

CAR FOREMEN'S ASSOCIATION OF ST. LOUIS, MO.—R. E. Giger, 721 North 23rd St., East St. Louis, Ill. Meetings, first Tuesday in month at the American Hotel Annex, St. Louis.

CENTRAL RAILWAY CLUB.—Harry D. Vought, 26 Cortlandt St., New York. Regular meetings, 2nd Thursday, January to November. Interim meetings, 2nd Thursday, February, April, June, Hotel Statler, Buffalo, N. Y.

CHICAGO CLAIM CONFERENCE, Personal Injury Section.—F. L. Johnson, Chicago & Alton R. R., 340 Harrison St., Chicago. Meets 12:30 p. m., first Monday each month, Sherman Hotel, Chicago.

CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S ASSOCIATION.—A. S. Sternberg, Belt Ry. of Chicago, Polk and Dearborn Sts., Chicago. Annual convention, September 22-24, Hotel Sherman, Chicago.

CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S SUPPLY MEN'S ASSOCIATION.—Bradley S. Johnson, W. H. Miner, Rookery Bldg., Chicago, Ill. Meeting with Chief Interchange Car Inspectors' and Car Foremen's Association.

CINCINNATI RAILROAD CLUB.—W. C. Cooder, Union Central Bldg., Cincinnati, Ohio. Meetings, 2nd Tuesday in February, May, September and November.

CLEVELAND STEAM RAILWAY CLUB.—F. L. Frericks, 14416 Alder Ave., Cleveland, Ohio. Meetings, first Monday each month, Hotel Cleveland, Public Square, Cleveland.

EASTERN RAILROAD ASSOCIATION.—E. N. Bessling, 614 F St., N. W., Washington, D. C.

FREIGHT CLAIM ASSOCIATION.—(See American Railway Association, Division VII.)

INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.—W. J. Mayer, Michigan Central R. R., Detroit, Mich. Next meeting, August 18-20, 1925, Hotel Winton, Cleveland, O. Exhibit by International Railroad Master Blacksmiths' Supply Men's Association.

INTERNATIONAL RAILROAD MASTER BLACKSMITHS' SUPPLY MEN'S ASSOCIATION.—Edwin T. Jackman, 710 W. Lake St., Chicago.

INTERNATIONAL RAILWAY CONGRESS.—Office of Permanent Commission of the Association, 74 rue du Progrès, Brussels, Belgium. General secretary, P. Ghilain. Next session of the Congress, Spain, 1926.

INTERNATIONAL RAILWAY FUEL ASSOCIATION.—J. B. Hutchison, 1809 Capitol Avenue, Omaha, Neb. Annual convention, May 11-14, 1926, Chicago. Exhibit by International Railway Supply Men's, New York.

INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.—Wm. Hall, 1061 W. Wabasha Ave., Winona, Minn. Annual convention, September 8-11, 1925, Hotel Sherman, Chicago.

INTERNATIONAL RAILWAY SUPPLY MEN'S ASSOCIATION.—F. S. Wilcoxen, The Edna Brass Manufacturing Company, 460 McCormick Bldg., Chicago, Ill. Meeting with International Railway Fuel Association.

MASTER BOILER MAKERS' ASSOCIATION.—Harry D. Vought, 26 Cortlandt St., New York.

MASTER CAR AND LOCOMOTIVE PAINTERS' ASSOCIATION.—(See A. R. A., Division V.)

MASTER CAR BUILDERS' ASSOCIATION.—(See A. R. A., Division V.)

MOBILE TRAFFIC & TRANSPORTATION CLUB.—T. C. Schley, 71 Conti St., Mobile, Ala. Regular dinner meetings, 6 p. m., on 2nd Thursday of each month, Cawthon Vineyard, Mobile, Ala.

NATIONAL ASSOCIATION OF RAILWAY TIE PRODUCERS.—J. S. Penney, T. J. Moss Tie Company, 720 Security Bldg., St. Louis, Mo. Next convention, January 28-29, 1926, Hotel Cleveland, Cleveland, Ohio.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—James B. Walker, 49 Lafayette St., New York.

NATIONAL FOREIGN TRADE COUNCIL.—O. K. Davis, 1 Hanover Square, New York.

NATIONAL HIGHWAY TRAFFIC ASSOCIATION.—Elmer Thompson, 12 East 53rd St., New York.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. W. Kelly, 825 South Wabash Ave., Chicago. Annual exhibition, March 8-11, Coliseum, Chicago, at convention of American Railway Engineering Association.

NATIONAL SAFETY COUNCIL.—Steam Railroad Section: E. R. Cott, Safety Agent, Hocking Valley Ry., Columbus, Ohio.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, 2nd Tuesday in month, excepting June, July, August and September, Copley-Plaza Hotel, Boston, Mass.

NEW YORK RAILROAD CLUB.—Harry D. Vought, 26 Cortlandt St., New York. Regular meetings, 3rd Friday in month, except June, July and August, at 29 W. 39th St., New York.

PACIFIC RAILWAY CLUB.—W. S. Wollner, 64 Pine St., San Francisco, Cal. Regular meetings, 2nd Thursday in month, alternately in San Francisco and Oakland.

RAILWAY ACCOUNTING OFFICERS' ASSOCIATION.—E. R. Woodson, 1116 Woodward Building, Washington, D. C.

RAILWAY BUSINESS ASSOCIATION.—Frank W. Noxon, 600 Liberty Bldg., Broad and Chestnut Sts., Philadelphia, Pa. Annual meeting, November, 1925.

RAILWAY CAR MANUFACTURERS' ASSOCIATION.—W. C. Tabbert, 61 Broadway, New York.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 515 Grandview Ave., Pittsburgh, Pa. Regular meetings, 4th Thursday in month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY DEVELOPMENT ASSOCIATION.—(See Am. Ry. Development Assn.)

RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.—Edward Wray, 9 S. Clinton St., Chicago. Annual meeting with Association of Railway Electrical Engineers.

RAILWAY EQUIPMENT MANUFACTURERS' ASSOCIATION.—Joseph Sinkler, Pilot Packing Co., Peoples Gas Bldg., Chicago. Meeting with Traveling Engineers' Association.

RAILWAY FIRE PROTECTION ASSOCIATION.—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md. Annual meeting, October 20-22, 1925, Chicago.

RAILWAY REAL ESTATE ASSOCIATION.—C. C. Marlor, Room 1243, Transportation Building, Chicago.

RAILWAY SIGNAL ASSOCIATION.—(See A. R. A., Division IV., Signal Section).

RAILWAY STOREKEEPERS' ASSOCIATION.—(See A. R. A., Division VI.)

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 1841 Oliver Bldg., Pittsburgh, Pa. Meets with Mechanical Division, A. R. A.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, 30 Church St., New York. Meets with Telegraph and Telephone Section of A. R. A., Divisicn I.

RAILWAY TREASURY OFFICERS' ASSOCIATION.—L. W. Cox, Commercial Trust Bldg., Philadelphia, Pa. Annual meeting, September 8-9, 1925, Hotel Champlain, Bluff Point, N. Y.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—P. J. McAndrews, C. & N. W. Ry., Sterling, Ill. Next convention, September 22-24, 1925, Kansas City, Mo. Exhibit by Track Supply Association.

ST. LOUIS RAILWAY CLUB.—B. W. Frauenthal, Union Station, St. Louis, Mo. Regular meetings, 2nd Friday in month, except June, July and August.

SIGNAL APPLIANCE ASSOCIATION.—F. W. Edmunds, Sunbeam Electric Manufacturing Company, New York City. Meeting with American Railway Association, Signal Section.

SOUTHEASTERN CARMEN'S INTERCHANGE ASSOCIATION.—J. E. Rubley, Southern Railway Shop, Atlanta, Ga. Meets semi-annually.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, P. O. Box 1205, Atlanta, Ga. Regular meetings, 3rd Thursday in January, March, May, July, September and November, Piedmont Hotel, Atlanta.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—J. L. Carrier, Car. Serv. Agent, Tenn. Cent. Ry., 319 Seventh Ave., North Nashville, Tenn.

SUPPLY ASSOCIATION OF AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—H. S. White, 9 N. Jefferson St., Chicago.

TRACK SUPPLY ASSOCIATION.—W. C. Kidd, Ramapo-Ajax Corporation, Hillburn, N. Y. Meets with Roadmasters' and Maintenance of Way Association.

TRAVELING ENGINEERS' ASSOCIATION.—W. O. Thompson, 1177 East 98th St., Cleveland, Ohio. Annual meeting, September 15-18, 1925, Chicago. Exhibit by Railway Equipment Manufacturers' Association.

WESTERN RAILWAY CLUB.—Bruce V. Crandall, 226 West Jackson Boulevard, Room 1001, Chicago. Regular meetings, 3rd Monday each month, excent June, July and August.

WESTERN SOCIETY OF ENGINEERS.—Edgar S. Nethercut, 1735 Monadnock Block, Chicago, Ill.

Traffic News

The Missouri Public Service Commission has issued an order requiring the railways in the state of Missouri with lines south of the Missouri Pacific between St. Louis and Kansas City, to cancel tariffs, filed to become effective October 31, 1924, which would have increased the class freight rates in southern Missouri. The rates were suspended pending investigation by the commission.

A majority of the 50 clubs composing the Associated Traffic Clubs of America have ratified resolutions adopted at its recent convention at Kansas City, Mo., demanding the repeal of the Hoch-Smith Resolution of the last congress under which the Interstate Commerce Commission is instructed to make a general investigation of the freight rate structure. The resolutions condemn the proposal as a mistaken theory and an effort at political rate making.

Maritime and Western Provinces Plan Lower Rates Campaign

The appointment of a freight rate expert for the Maritime Provinces was urged by D. R. Turnbull of the Halifax Board of Trade at an economic conference of those provinces held in Moncton, N. B., last week. The freight rate question, he said, was the most vital problem in those provinces, and if there was to be progress it would be only through a readjustment of Maritime freight rates. For 30 or 40 years reasonably favorable rates were enjoyed, he said, but with the coming of the war advantage had been taken of the conditions created by that struggle and the Maritime Provinces had suffered thereby.

J. W. Hindman, president of the Associated Boards of Trade of Prince Edward Island, advocated the employment of a traffic expert, and declared that what the Maritimes wanted was the restoration of the Intercolonial Railway under old conditions. That road had been built for the exchange of trade between east and west in Canada, and it cost only a fraction of what the canals in Ontario cost. D. W. Robb of Amherst, N. S., said that readjustment of freight rates to stimulate east and west traffic was essential. He thought that industrial conditions in the Maritimes could be improved with more favorable rates. F. M. Sclanders of the St. John Board of Trade scored the overlapping in the work of the Dominion government and the Canadian National in getting immigrants into Canada. Matthew Lodge, of Moncton, N. B., a director of the Canadian National, while deploring the tendency to blame the railways for all troubles, admitted there was duplication in this work.

At a conference in Edmonton, Alberta, last week of Western Canada mayors and other civic officials, G. G. McGeer, a lawyer of Vancouver who has acted as counsel for the British Columbia government for many years before the Dominion Railway Board on freight rate hearings, spoke on the Western rates problem. Among those attending the meeting were: Premier Herbert Greenfield of Alberta; D. C. Coleman, vice-president of the Western Lines, Canadian Pacific; Senator William A. Griesbach; and Daniel W. Warner, a Western member of the House of Commons at Ottawa.

Mr. McGeer declared that the reason for freight rate discrimination against Western Canada was that the railways and financial institutions of Canada were controlled by men whose sympathy and knowledge was not of the West. It was by building up a strong Western sentiment, united in its demands, that this position could be met. As a specific example of the discrimination Mr. McGeer said that sugar was brought from the East over greater mileage and at lower rates than it could be carried into Alberta from the Pacific Coast. The result was that the Halifax refineries controlled the Winnipeg market to the detriment of the Vancouver sugar dealers.

D. C. Coleman, of the Canadian Pacific, spoke briefly without expressing any opinions on the question of discrimination, pointing out that as Parliament at Ottawa had instructed the Dominion Railway Board to formulate a policy of equalization of rates it would not be proper to prejudice the case before the Board had gotten under way.

Commission and Court News

Interstate Commerce Commission

Commission Finds Lake Cargo Coal Rates Reasonable

The Interstate Commerce Commission on July 24 made public its decision dated July 16, in the lake cargo coal rate cases, finding that the freight rates on bituminous coal, in carloads, from mining districts in Pennsylvania, Ohio, Maryland, West Virginia, Virginia, Kentucky and Tennessee to Lake Erie ports for transshipment by vessel, are not unreasonable, unduly prejudicial or otherwise unlawful. The commission thus rejected the conclusions of the tentative report made by its examiners, who had recommended a reduction in the rates from the complaining districts, the Pittsburgh district of Pennsylvania, the panhandle of West Virginia and the No. 8 and Cambridge districts of Ohio, and advances in the rates from the more distant districts to the lake. The case was one of the most hotly contested coal-rate cases ever brought before the commission, involving rates which had been before it in two preceding comprehensive cases and almost every conceivable view as to the relationships between the rates from the different districts.

The decision covers a consolidation of three complaints, in which operators of mines in the Pittsburgh, panhandle of West Virginia, No. 8 and Cambridge districts contended that their rates were unreasonable and unduly prejudicial as compared with the rates from all other districts in the Appalachian region, and operators of mines in the Fairmont district of West Virginia contended that their rates were unreasonable and unduly prejudicial as compared with the rates from the Pittsburgh, Ohio No. 8 and Cambridge districts, the Crooksville and Shawnee districts of southern Ohio, and the Connellsville district of southwestern Pennsylvania. Complainants also invoked the commission's power to prescribe minimum rates in so far as requisite to effectuate the adjustments sought. A large number of other coal producers, consumers, commercial and civic organizations and state commissions intervened and took various positions; while the southern West Virginia, Virginia, Kentucky and Tennessee coal operators aligned themselves with the defendant railways, except the Wheeling & Lake Erie, in opposition to any disturbance of the existing rate structure. The Wheeling & Lake Erie admitted that the present adjustment is unduly prejudicial to the Pittsburgh, No. 8 and Cambridge districts but contended that the rates from the other districts are too low.

The originating territory embraces some 53 districts from which rates on lake cargo coal to lower Lake Erie ports are in effect but of which only 28 shipped lake cargo coal in 1923. From the Pittsburgh, Ohio No. 8, Cambridge and Fairmont districts to all the ports reached by them the rates are $1.66, $1.63, $1.63 and $1.81, respectively. The commission's decision was given in a 60-page report analyzing the contentions of the various parties. "No rate war is imminent," the commission said. "Allegations in the Ohio complaints that rates from the southern districts were unduly low were withdrawn at the hearing. Regulatory commissions of the states where most of this coal is consumed contend vigorously and earnestly that grave public injury would be caused by a widening of these differentials and that the public interest would be promoted by narrowing them. In no proceeding before us have consumers and their representatives insisted more earnestly and forcibly than they have here that their interests be not submerged in the struggle between competing coal districts."

No mention was made in the report of any relation between this case and the Hoch-Smith rate resolution, although the commission had heard arguments on a petition by a large group of the operators that the case be reopened for evidence regarding the present condition of the bituminous coal industry. Commissioner Eastman and McManamy dissented from the majority report.

Personnel of Commissions

L. O. Whitsell of Orange county, Cal., has been appointed a member of the Railroad Commission of California, succeeding Egerton Shore, who has resigned.

Labor News

J. G. Luhrsen, president of the American Train Dispatchers' Association, was re-elected to that office at the close of the annual convention of the association in Chicago on July 24. Plans for the entrance of the association into the banking and investment field were announced but no action was taken by the convention as a whole. The delegates approved the recommendation of the president that it give active support to a campaign for the replacement of the present Railroad Labor Board by a bi-partisan body, consisting of representatives of the railway managements and railway employees, to act in the settlement of railway labor disputes.

Labor Board Decisions

The Nashville, Chattanooga & St. Louis maintains a rock crushing plant at Cumberland, Ala., which was opened in the early part of 1924 and is operated for the production of ballast for maintenance and construction purposes. It is conducted under the direction of the division engineer. The carrier took the position that the employees at this plant did not come under the provision of Title 3 of the Transportation Act of 1920 and would not grant a request of the employees that they be placed under the agreement for maintenance of way employees. The case was brought before the labor board by the United Brotherhood of Maintenance of Way Employees and Railway Shop Laborers and the board decided in favor of the employees.—*Decision No.* 3792.

Effective February 1, 1924, the Oregon Washington notified three water service repair men, with headquarters at La Grande, Ore., that their basis of compensation would be changed from 60½ cents per hour to $126.64 a month, in accordance with Section 28, Article V of the agreement. As these men had been receiving overtime for all service performed in excess of eight hours and all time engaged in traveling, the change to the monthly basis resulted in an appreciable reduction in earnings and they protested to the labor board through the Brotherhood of Maintenance of Way Employees and Railway Shop Laborers, it being the contention that this action was in direct violation of the letter and spirit of the agreement. The carrier took the position that the hourly basis of compensation was not in conformity with the rules and that they were therefore justified in making the change. The opinion of the board was that the service performed by these employees came within the language "assigned to duties requiring variable or intermittent hours, etc.," and under the technical application of the rules the new basis of compensation applied by the railroad was correct. The board's decision denied the request of the employees.—*Decision No.* 3727.

The Railroad Labor Board has upheld the claim of the employees in a dispute between the Brotherhood of Railway and Steamship Clerks and the Missouri-Kansas-Texas on the question of the lay-off of certain employees in Oklahoma City, Okla., due to their offices being cut off from the railway and out of service for several days on account of a flood. An office of the Missouri-Kansas-Texas at Oklahoma City is located at "Packingtown," on the west side of the river. It was shown in the hearing that, on account of the flood, the belt line which connects "Packingtown" with Oklahoma City was temporarily out of service and that the agent notified the clerks in his office to go to their homes and hold themselves in readiness to report for duty on short notice. The employees protested, contending that they were in no way affected by reason of the flood and that there was sufficient work in the office to occupy their time. The employees claimed that they should not have been required to absent themselves from their usual positions and claimed violation of the agreement. The management took the position that the flood suspended operations in the Packingtown office and that there was no work for the employees to perform. It held also that the rule against the reduction of days worked below six per week was not intended to cover a situation such as arose due to the flood. This contention was overruled by the Labor Board.—*Decision No.* 3865.

Foreign Railway News

New Line in Turkey

The Turkish government plans the construction of a 170-mile line running eastward from Serai-Eunu on its Afium-Karahissar-Konia line.

Gage Differences Likely to Become Serious Problem in Africa

The widely different railway gages in Africa, while they have not yet caused any serious difficulties because the railways have grown for the most part in groups which are not yet connected, will, as the railways expand and the different systems become connected, become increasingly embarrassing to efficient transportation, according to a correspondent writing in the Times (London) Trade Supplement. Roughly speaking, the principal gages employed in Africa are three in number, standard, meter and 3 ft. 6 in. Standard is largely used in the north, meter in the great French possessions in West Africa and 3 ft. 6 in. in South Africa. There are, moreover, important areas where the 3 ft. 6 in. predominates elsewhere, as, for instance, in the British colonies in West Africa and Sudan, and the meter gage predominates in large sections of East Africa.

Compulsory Paid Vacations Proposed in Britain

A bill has been introduced into the British parliament, the object of which is to enable all persons who have been in the same employment for a period of 12 months, to have an annual holiday of not less than 8 clear consecutive days. The holiday is to be at full pay, unless during the period the employed person takes paid work.

The bill according to advices received by Bankers Trust Company of New York from its British Information Service is intended to include all persons employed under any contract of service or apprenticeship, and where the employed person is paid by the piece, or partly by the piece and partly by time, his wages are to be calculated for the purpose of the vacation in a manner provided in the bill, and any dispute may be settled by the registrar of the county court without an appeal. There is a provision rendering it penal for an employer to attempt to evade the provisions of the bill by dismissing or suspending an employed person, the penal liability being in addition to any civil liability. The bill does not extend to Northern Ireland.

Railways Proposed to Relieve Congestion at Santos

As a result of the congestion at the port of Santos, harbor and railway improvements are receiving serious consideration by the state of Sao Paulo, Brazil, according to Consul Haeberle at Sao Paulo. At present, Santos is the only port through which the state can carry on its maritime commercial relations with foreign countries and with other states of the union, and the Sao Paulo Railway is the only line connecting the port with the interior.

All merchandise entering or leaving Santos is handled by the Companhia Docas de Santos, which has a contract with the federal government giving it exclusive rights in the harbor. The capacity of this company is now taxed to the limit, and the building of a new railway to Santos would not, therefore, be likely to solve the problem unless the state government took over the docks and provided increased docking facilities.

Three projects are being considered: (1) An extension of the State-owned Sorocabana Railway, from Mayrink or Osasco to Santos; (2) electrification of the Sao Paulo Railway with a parallel line running from Sao Paulo to Santos, provided the company obtains a renewal of its concessions; (3) the construction of a line from Sao Paulo to the port of Sao Sebastian.

The first project is an old one but is assuming new interest in view of the conditions described above, as well as the loan recently effected in the United States by the government of Sao Paulo. The second is arousing especial interest in view of the

expiration of the contract of the Sao Paulo Railway in 1927 and the question of its renewal. The third project is also an old one, but is being discussed because apparently competing interests are endeavoring to obtain the concession for building the line.

The following are comparative estimates of the cost of construction and also an estimate of the purchase of docks by the government (needed in conjunction with the first and second projects):

Purchase of docks and improvements	$25,500,000
Building of Mayrink-Santos line	26,000,000
Improvements on main line	5,500,000
Purchase of Sao Paulo Railway, with construction of new line and electrification (£7,000,000 capital of company and £3,000,000 for construction)	47,000,000

The debentures, it is estimated, would represent the following values:

Sao Sebastian line and port works	$31,000,000
Mayrink-Santos line, with purchase of docks	60,000,000
Sao Paulo Railway and docks	80,000,000

Miscellaneous

The following items have been received by the Bureau of Foreign & Domestic Commerce from its representatives in various parts of the world:

A total of $5,840,804 for improvements to the Argentine State Railways is asked to be included in the national budget for 1925-26. About half the total appropriation asked is for the purchase of machinery, including 30 locomotives and 10,000 wheels. It is proposed also to convert a number of coal and wood burning locomotives to oil burners.

A total of $18,000,000 for the electrification of the Austrian Federal Railways has been authorized by the League of Nations Finance Committee. The expenditure is to be spread over a period of three years in accordance with the electrification program now under way.

A contract for the construction of a branch line on the Ahuachapan-Guatemalan frontier has been awarded to the International Railways of Central America by the Salvadorean government.

The plans for the construction of rapid transit subways by the Tokio Municipality Electric Bureau have been approved by the Japanese government, which means that work will go ahead.

The Chinese Government Railways' operating surplus decreased $8,587,000, to $25,664,000 in 1924. The actual cash position of the railways is even worse than indicated, as the 1923 figures contained only about $4,000,000 of non-cash items (mostly uncollectible) for military and other government service revenue, while those for 1924 undoubtedly contain as much as $12,000,000. Hence, the decrease in commercial business will probably reach about $16,000,000.

The Northern Railway of Spain will issue bonds to the extent of 200,000,000 pesetas ($29,060,000), the proceeds to be used for the improvement of the road, mainly double-tracking and electrification.

Quicker transit shipment via Austria and Hungary will be made possible henceforth by the installation of new fast trains. Transit shipments to German ports through Hungary will be facilitated, arrangements having been made for unimpeded service from Hungary and Rumania to Germany, as well as to the Netherlands, Belgium, and France.

An appropriation of £4,350,000 for the Gold Coast port works and railways is provided in an ordinance published on May 2.

A Belgian group is negotiating for the construction of railways in Greece according to a report received from R. O. Hall, commercial attaché at Athens.

The Greek government has ordered 22 passenger coaches from Hungarian factories for use on the railways of the Peloponnesus.

The Chilean State Railways will increase the sur-charge 10 per cent on passenger and freight traffic. This has progressively increased during the past four months from 60 to 90 per cent, or an increase of 50 per cent in freight and passenger tariffs.

The state railway administration of Argentina has requested an appropriation of 7,200,000 pesos for new equipment. Specified purchases include 30 locomotives, 10,000 car wheels, 20 tank cars and 40 passenger cars.

The Victorian Railways contemplate introducing M. C. B. automatic couplers. These couplers are already being used on the Commonwealth Railways, and on the railways of New South Wales and South Australia.

Equipment and Supplies

Locomotives

THE FLORIDA EAST COAST is inquiring for 10 Mountain type locomotives.

THE SAVANNAH & ATLANTA has ordered one Mikado type locomotive from the Baldwin Locomotive Works.

THE DETROIT TERMINAL has ordered 2, eight-wheel switching locomotives from the Baldwin Locomotive Works.

Freight Cars

THE RAY CONSOLIDATED COPPER COMPANY is inquiring for five flat cars.

THE LEHIGH & NEW ENGLAND contemplates having repairs made to 600 hopper cars.

THE STANDARD OIL COMPANY is inquiring for two flat cars and three gondola cars of 50 tons' capacity.

THE CUBAN DOMINICAN SUGAR COMPANY has ordered 217 cane cars of 30 tons' capacity from the Magor Car Corporation.

THE WABASH has ordered 12 replacement steel underframe box cars of 40 tons' capacity from the American Car & Foundry Company.

THE UPPER MERION & PLYMOUTH has given a contract to the American Car & Foundry Company for making repairs to 11 steel hopper cars.

THE LIMA-TOLEDO has ordered 10 steel underframe trailer box cars, 45 ft. long, of 40 tons' capacity, from the American Car & Foundry Company.

THE WESTERN PAPER MAKERS' CHEMICAL COMPANY has ordered one tank car of 40 tons' and 8,000 gal. capacity from the American Car & Foundry Company.

Passenger Cars

THE ATCHISON, TOPEKA & SANTA FE is inquiring for four cafe cars.

THE CHICAGO & ALTON has placed an order with the Oneida Manufacturing Company for the installation of power units on a baggage and passenger car.

THE BOSTON & MAINE has ordered from the J. G. Brill Company 6 combination passenger and baggage gasoline rail motor cars; 2 combination passenger and baggage, 60-ft. gas-electric cars; one combination passenger and baggage, 73-ft. gas-electric car; 3 passenger trailers and 2 passenger and mail trailers.

Machinery and Tools

THE MONONGAHELA RAILWAY has placed an order for a 10-ton auxiliary hoist.

THE READING COMPANY has placed an order for a 35-ton, 60-ft. span, gantry crane.

Iron and Steel

THE SOUTHERN RAILWAY is inquiring for 1,400 tons of steel for eight bridges.

THE CENTRAL OF NEW JERSEY is in the market for 4,000 tons of steel for its Newark Bay bridge.

THE ERIE has ordered about 5,500 tons of steel from the American Bridge Company for a new pier at Jersey City, N. J.

THE ILLINOIS CENTRAL has placed an order with the American Bridge Company for 1,500 tons of structural steel for a viaduct in Chicago.

THE BALDWIN LOCOMOTIVE WORKS has placed an order with the McClintic-Marshall Company for 300 tons of structural steel for a shop building at Eddystone, Pa.

THE NEW YORK CENTRAL has placed orders for sheet metal as follows: For black and galvanized sheets, Youngstown Sheet & Tube Company, 100 tons and Sheet Metal Manufacturing Company, not to exceed 100 tons. For blue annealed sheets, Falcon Steel Company, 50 tons and Cleveland Steel Company, 50 tons. For black sheets and blue annealed sheets, Ashtabula Sheet Steel Company, not to exceed 15 tons.

Miscellaneous

THE NEW YORK, WESTCHESTER & BOSTON contemplates buying a number of motor buses.

THE NEW YORK, NEW HAVEN & HARTFORD has placed orders for 38 motor buses as follows:

The Mack Company, 12 buses; White Company, 8 buses; International Company, 8 buses and through the National Railway Appliance Company with the Yellow Coach Manufacturing Company, 10 buses.

Signaling

THE NEW YORK, CHICAGO & ST. LOUIS has ordered from the Union Switch & Signal Company a mechanical interlocking, 10 working levers, for Bluffton, Ind.

THE BALTIMORE & OHIO has ordered from the Hall Switch & Signal Company, Garwood, N. J., 34 color-position-light signals for additional new work on the Staten Island lines.

THE SEABOARD AIR LINE has contracted with the Union Switch & Signal Company for the installation of automatic block signals on its line from Richmond, Va., to Hamlet, N. C., 254 miles; color-light signals, three-indication.

THE SOUTHERN PACIFIC has ordered from the National Safety Appliance Company, 136 track magnets and forestalling valves for 75 locomotives. This material, for the automatic train control system being installed, is to be used between Tracy, Cal., and Fresno.

THE NEW YORK CENTRAL has ordered from the Hall Switch & Signal Company, 203 "searchlight" signals, 50 marker signals together with a large quantity of relays, switch boxes and other material, for new signal work at Rochester, N. Y., Brighton, and other stations in that vicinity.

THE NORFOLK & WESTERN has ordered from the Union Switch & Signal Company position-light signals and low-voltage switch-and-lock movements for extensive signaling at Loch Laird, Va., and also for a similar installation at Glasgow, Va. For the two plants, 18 interlocked circuit controllers will be required.

Extensive Changes on the Southern

The Southern Railway is to install automatic block signals on its line from Morristown, Tenn., to Biltmore, N. C., 93 miles, using 3-indication, color-light signals. Specifications have been issued calling for material and installation, but the contract has not yet been let.

Light signals also will be installed in place of semaphores on the line between Morristown and Knoxville, 42 miles; also in place of semaphores on the line between Atlanta, Ga., and Austell, 18 miles, making a continuous installation of light signals of 167 miles between Atlanta and Birmingham.

The semaphore signals displaced by the changes here noted are to be used, in place of signals of older types, on the line between Chattanooga, Tenn., and Meridian, Miss. The length of road affected by these latter changes will be over 400 miles, and when they are completed the Queen & Crescent line will have 3-position, upper-quadrant semaphores on 633 miles of line.

Except as noted in the first paragraph above, all work is to be done by the railway company's forces, including all necessary pole-line construction.

Supply Trade News

Richard J. O'Brien, assistant to president of the **Waugh Equipment Company,** Chicago, has been appointed general manager.

The Union Tank Car Company is constructing repair shops, including a foundry, a machine shop, a power plant and a wheel shop, at Whiting, Ind.

John P. Bourke, eastern sales manager of the **Ewald Iron Company,** Louisville, Ky., has been elected a vice-president, with office at 33 West Forty-second street, New York City.

The Crane Company will erect a six-story factory branch and distributing plant at Los Angeles, Cal. Only three floors of the building, to cost $100,000, will be constructed this year.

J. C. O'Connor, assistant secretary and advertising manager of the **Galena-Signal Oil Company,** Franklin, Pa., has been appointed manager of the railway accounting department, succeeding D. J. Hart, deceased. Mr. O'Connor will retain supervision of the company's advertising, with headquarters at Franklin.

The Cummings Car & Coach Company has been incorporated, with headquarters at 111 W. Monroe street, Chicago, to manufacture railway appliances. The company has a capital of $200,000, and has issued 1,000 shares of no par value stock. Walter J. Cummings, O. N. Hebner and John T. Giblin are the incorporators.

Fred M. Randlett has been appointed district manager of the Pacific northwest territory for the **Robert W. Hunt Company,** inspecting, testing and consulting engineers, with general offices at Chicago. Mr. Randlett has been chief engineer of the water department of Portland, Oregon, for the past eight years, and previous to that service he was in the engineering department of the New York, New Haven & Hartford and Stone & Webster, Inc.

The Simplex Semimetallic Packing Company, Pittsburgh, Pa., has acquired all patents, patent rights, trade marks, etc., of the **Mason Semi Metallic Packing Company,** of Pittsburgh, manufacturers of air pump and piston packings. The Simplex company has discontinued the office of the Mason Packing Company which was located in the Renshaw building and has opened offices in the Oliver building, Pittsburgh, where the business of the company will be conducted.

H. G. Mastin has been appointed representative in the sales department of the **Locomotive Stoker Company,** eastern district, with headquarters at New York City. Mr. Mastin was born in December, 1887, at Millbrook, N. Y. He served from 1906 to 1918 on the New York, Ontario & Western consecutively as locomotive fireman, traveling fireman and assistant road foreman of engines, and since October, 1918, as mechanical expert for the Locomotive Stoker Company.

Obituary

Carl A. Methfessel, manager of sales, eastern district, for the Duff Manufacturing Company, New York, died of heart trouble on July 22, at his home in Ridgefield Park, N. J., at the age of 48. He had been associated with the Duff Manufacturing Company for 15 years and was formerly connected with the Delaware, Lackawanna & Western. Mr. Methfessel was in the U. S. Navy for several years, and was a veteran of the Spanish-American War.

W. O. Duntley, former president of the Chicago Pneumatic Tool Company, who retired in 1918, died in a sanitarium near Chicago on July 27. He had suffered a nervous breakdown several months before. Mr. Duntley was born in Wyandotte, Mich., in 1867, and was employed as a salesman for the Chicago Pneumatic Tool Company at Chicago in 1894. He

was later promoted successively to general sales agent, general manager, and vice-president, and in 1909 was elected president. Mr. Duntley retired in 1918, partly on account of ill health and partly to enable himself to devote more attention to his private interests.

Charles T. Westlake, chief mechanical engineer of the Commonwealth Steel Company, St. Louis, Mo., died on July 22. Mr. Westlake had served with the Commonwealth Steel Company from its beginning in 1901, having superintended the erection of the original plant, and he was the company's first works manager. Subsequently he was transferred to the St. Louis office as chief mechanical engineer, which position he held until the time of his death. Until recent years he was actively in charge of the company's mechanical department, but later his physical condition required that he be relieved of all details and for the past few years he has served the company chiefly in a consulting capacity.

Trade Publications

ELEVATORS.—Delta portable and stationary elevators, designed for either hand or electric operation, are described in a 40-page illustrated catalog, No. 106, recently issued by the New Jersey Foundry & Machine Company, New York. These elevators are particularly adapted for use in storehouses or other places where the loading or unloading of heavy or bulky material is a regular factor.

JORDAN SPREADERS.—The O. F. Jordan Company, East Chicago, Ind., has issued a 24-page catalog in which the diversified uses of this equipment are demonstrated by illustrations and text. In addition to the original purpose for this equipment, namely that of spreading material unloaded from cars, special attention is given to the particular usefulness of the spreader in ditching, in the disposal of snow in yards, in digging trenches, in cutting ice and in the storing of coal and other materials. Tables give dimensions and numerous diagrams illustrate the roadbed sections which may be obtained with various wings and attachments.

"THE HIGHEST FREIGHT RATE the farmer pays is not expressed in the tariffs but is to be found in his losses due to inefficient and insufficient service. The highest freight rates are to be found in poorly equipped and poorly operated roads, roads unable to give the shipper first class service."—Fred W. Sargent, president of the Chicago & North Western, before the Mid-West Regional Advisory Board in Milwaukee, Wis., on July 15.

THE EXCURSION TRAINS operated by the Chicago & North Western over the week end, July 25-27, were even more heavily patronized than those previously run. The excursion from Milwaukee to Chicago was the most popular, 4,500 passengers making the trip. The excursion from Madison to Chicago was run in two sections, carrying 2,400 passengers. Other excursion trains included one from Beloit, Wis., to Chicago, with 700 passengers; one from Ashland, Wis., to Chicago, with 900 passengers; one from Marshfield, Wis., to Chicago, with 1,000 passengers, and one from Minneapolis to Chicago, with 1,200 passengers.

The Chicago, Milwaukee & St. Paul has carried more than 7,000 passengers on the excursion trains which it has run in the past few weeks. It ran its first long distance excursion from Chicago to the lakes of northern Wisconsin on July 25, when 400 passengers made the trip. Other excursions and the number of passengers carried have been as follows: Minneapolis to Chicago, 1100 passengers; Excelsior Springs, Mo., to Chicago, 600 passengers; Chicago to Milwaukee, 900 passengers; Mineral Point division to Chicago, 600 passengers; Milwaukee, Wis., to Kilbourn, 700 passengers; Davenport, Ia., to Milwaukee, 1050 passengers.

The Chicago & North Western, the Chicago Great Western, and the Chicago, Milwaukee & St. Paul are running excursion trains from Chicago to Minneapolis on August 1 with a round trip fare of $7. All three trains are to leave Chicago on Saturday evening, returning from Minneapolis Sunday night. Excursion tickets at the rate of one cent a mile are also offered by the Chicago Great Western for trips to Minneapolis from stations north of Fort Dodge, Ia., Oelwein, and Rochester, Minn. These tickets are good on all regular trains leaving any of the stations after noon on Saturday and returning before noon on Monday.

Railway Construction

AROOSTOOK VALLEY.—The Interstate Commerce Commission has made public a report proposed by Examiner Brown recommending a finding that public convenience and necessity have not been shown to require the construction by this company of a line from Sweden to St. Agatha, Me., 27 miles.

ATCHISON, TOPEKA & SANTA FE.—Bids are being received for the construction of a passenger station at Monrovia, Cal., to cost $75,000, as reported in the *Railway Age* of June 6.

ATCHISON, TOPEKA & SANTA FE.—A contract has been awarded to Jerome A. Moss, Chicago, for the construction of a fruit terminal warehouse at Chicago; to cost $250,000. The building will be of brick construction, four stories in height, and its dimensions will be 100 ft. by 800 ft. The contract for the construction of pavement for team tracks adjacent to the fruit terminal warehouse has also been awarded to Jerome A. Moss.

ATLANTA TERMINAL.—A contract has been awarded to the Foundation Company for taking down the Terminal train shed and the construction in its place of butterfly sheds, together with changes in the passenger concourse and other structural improvements in the union station at Atlanta, Ga.

BALTIMORE & OHIO.—A contract has been awarded to the James F. McCabe Company, Baltimore, Md., for the renewing of the substructure of a bridge at Folsom, W. Va. The work will entail an expenditure of approximately $42,000.

CANADIAN NATIONAL.—A contract has been awarded to Dutton, Roasa & Wistrand, Winnipeg, Man., for the grading of the Willowbunch, Man., branch line, 28 miles long. A contract has been awarded to J. G. Hargrave & Co., Ltd., Winnipeg, for the grading of the 21-mile St. Paul de Metis branch and the 44-mile Turtleford, Sask., branch. Bids were closed on July 27 for the grading on the 20-mile Pine Falls branch from Beaconia, Man., to Port Alexander.

CHICAGO & NORTH WESTERN.—The Interstate Commerce Commission has authorized this company to build a 3.5-mile extension northeasterly from a point near Gogebic, Mich., on its Ashland division. The new line will open up a large timber tract and will cost approximately $137,000.

FLORENCE, CLIFTON & PADUCAH.—This company has applied to the Interstate Commerce Commission for a certificate authorizing the construction of a line from Florence, Ala., to Paducah, Ky., 225 miles, and a branch from a point in Wayne county, Tenn., to Savannah, Tenn., 25 miles. A. B. Campbell, of Florence, Ala., is president.

GREAT NORTHERN.—The Interstate Commerce Commission has authorized this company to extend a branch line from its present terminus at Scobey, Mont., westerly to Opheim, approximately 50 miles; estimated cost $1,450,000.

GULF COAST LINES.—This company has awarded contracts for the construction of 80,000-barrel oil storage tanks at Hearne, Tex., and Harlingen; a 65,000-barrel oil storage tank at Kingsville, Tex., and a 55,000-barrel oil storage tank at Houston, Tex.

ILLINOIS CENTRAL.—A committee of engineers representing this company and the five other roads which enter Springfield, Ill., is considering the proposal to construct a union station at Springfield to replace the three stations now used.

LOS ANGELES BOARD OF PUBLIC WORKS.—Bids will be closed on August 26 for the construction of a viaduct in the Wilmington district, Los Angeles Harbor, Cal.; to cost $650,000. Railways entering the harbor will use the viaduct and will share in the cost of it.

LOUISIANA RAILWAY & NAVIGATION.—The Public Service Commission of Louisiana has authorized this company to abandon a line 17.2 miles in length from a point below Moreauville to Naples,

and to build a new line 19 miles in length from the point below Moreauville to a point on the right bank of the Mississippi in the parish of Pointe Coupée, opposite Angola, and to construct a bridge across the Atchafalaya river, near Simmsport.

PENNSYLVANIA.—A contract has been awarded to the Milliron Construction Company, Du Bois, Pa., for the relocation of 0.7 mile of track of the company's Sunbury division to permit the construction of a new state highway; estimated cost, $35,000.

ST. LOUIS, BROWNSVILLE & MEXICO.—The Interstate Commerce Commission, which had previously authorized this company to construct a 28-mile line from Lyford, Tex., to Edinburg, has now authorized a slightly different route for the line and the construction of two branch lines, making the total mileage to be constructed approximately 50; estimated cost $773,319, of which $118,400 represents right-of-way, which may be donated.

WABASH.—A contract has been awarded to W. W. Wuelner & Sons, St. Louis, Mo., for the construction of a passenger station at Centralia, Mo.

WABASH.—This company contemplates the construction of a bridge across the Sangamon river at Decatur, Ill. Preliminary plans call for the elevation of deck level 10 ft. higher than that of present bridge, with necessary elevation of tracks on both sides of the bridge. Plans for the work will not be completed for two months.

W. M. CADY LUMBER COMPANY.—The construction of a standard gage lumber road from Taylor, Ariz., to Timberland near Heber, a distance of 19 miles is planned.

New Railroad Proposed for Texas

The construction of a new railroad from Kerrville, Tex., to Brady, a distance of 85 miles, is proposed by the newly organized company of which Robert A. Stuart, of Fort Worth, Tex., is attorney. The proposed line would connect with the St. Louis-San Francisco at Brady.

New Line Planned in Mexico

According to Julian F. Lozano, formerly Mexican Consul at Chicago, negotiations have been practically completed with New York banks for the financing of the construction of a railroad between Saltillo, Coahuila, Mexico, and Tuxpan, Jalisco, a distance of approximately 500 miles.

Rouyn Gold Fields to Have Railway Soon

Many conferences with the Quebec government have been held in the last few weeks by the various railways desiring to get permission to build lines into the Rouyn goldfields, and following one conference last week Premier L. A. Taschereau announced at Quebec City that he had received a personal letter from Sir Henry Thornton, president of the Canadian National, in regard to the Rouyn Mines Railway and that he, Premier Taschereau, could assure the mining region that it would have a railway within a few months. It is known that a charter has been granted by the Quebec government to the Rouyn Mines Railway which is to be built with United States money and to be leased by the Canadian National.

While the question of the power of the federal government to give the Nipissing Central, an Ontario Government-owned road, a permit to build over Crown lands eastward from Ontario into Rouyn is before the Supreme Court of Canada, Ontario officials refuse to say much about their project, although Charles McCrea, Minister of Mines for Ontario, when asked about Sir Henry Thornton's plan to build a road from O'Brien down to Rouyn (O'Brien is on the National Transcontinental) said, "My only comment is that transportation into the Rouyn gold field should be provided without delay in the interests of Canadian mining development."

There is also talk of the Canadian Pacific still pressing for a chance to build into Rouyn from Angliers. There is no figure mentioned as a possible grant for extending the C. P. R. line from Angliers, but it is stated that by extending its line toward North Bay, after going through the gold fields, the traffic would be sufficient to warrant the expenditure involved.

Railway Financial News

ANN ARBOR.—*Bonds Authorized.*—The Interstate Commerce Commission has authorized the issue of not exceeding $75,000 of improvement and extension mortgage 6 per cent bonds, these bonds to be pledged and repledged from time to time up to June 30, 1927, as collateral security for notes. Authority to procure authentication and delivery of $47,000 of improvement and extension mortgage bonds was denied.

BUTTE, ANACONDA & PACIFIC.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon 16.75 miles of its line between Brown's, Mont., and Southern Cross.

CHESAPEAKE & OHIO.—*Civic Organizations Approve Nickel Plate Merger.*—Resolutions, adopted by councilmanic bodies, chambers of commerce and other civic organizations approving the Nickel Plate merger have been filed with the Interstate Commerce Commission by a large number of cities along the Chesapeake & Ohio.

In its preamble, a resolution adopted by the Richmond Chamber of Commerce said that the Van Sweringen merger, as proposed, "will be beneficial to Richmond, Hampton Roads, and Virginia generally." It then was resolved "that the Van Sweringens should be permitted to carry out their plans for a merger of the Chesapeake and Ohio with their other roads upon some plan fair and equitable to all stockholders."

The Retail Merchants' Association of Richmond also approved by resolution the Van Sweringen merger.

In a resolution, the city council of Newport News, Va., expressed the belief that the Nickel Plate Merger will be advantageous and urged the Interstate Commerce Commission to approve it. In addition to the resolution adopted by the city council, the people of Newport News also expressed their favorable sentiment to the merger through resolutions adopted by their chamber of commerce and local port commission.

Included among other resolutions endorsing the merger which have been presented to the commission are those adopted by the Lexington, Ky., Board of Commerce, the Charleston, W. Va., Chamber of Commerce, the Huntington, W. Va., Chamber of Commerce, the Ashland, Ky., Chamber of Commerce.

CHICAGO, MILWAUKEE & ST. PAUL.—*Receivers Report Inability to Secure Other Roads' Support.*—The receivers of the Chicago, Milwaukee & St. Paul have announced their inability to secure the support of the other western railroads for the Potter plan. The announcement appears in advertisements discussing the western freight rate situation. The statement concludes with the following:

If this plan had been in effect during 1924 the Milwaukee road would probably have avoided a receivership.

The receivers of the Chicago, Milwaukee & St. Paul have not been able to secure the support of the other western railroads to their plan and, therefore, have decided to advocate the plan independently for the benefit of this property and as the plan which best solves the railroad problem with the lowest burden to shippers. For this purpose the receivers of the Chicago, Milwaukee & St. Paul Railway have engaged former Secretary of State, Charles E. Hughes, to assist them in presenting the plan and urging its adoption. Full particulars about the plan can be obtained from any agent of the Chicago, Milwaukee & St. Paul or from the undersigned.

The statement is signed by the three receivers.

CHICAGO, MILWAUKEE & ST. PAUL.—*Roosevelt & Son Position.*—W. Emlen Roosevelt of Roosevelt & Son has issued a statement reading as follows:

"We are greatly pleased with the change in attitude of the reorganization managers of the St. Paul. They recognize our position that rates are of first importance.

"It is quite true that there may be some delay before the increase in rates is obtained; nevertheless we think that a delay is better than the acceptance of the present conditions. The extra expense of running the road in a receivership is not so great as to justify the bondholders in accepting the total loss of their present mortgage position and the stockholders in paying such a heavy assessment or losing all their interest in the road. If fair rates are given, the reorganization needs will be quite different.

"It is our belief, furthermore, that just rates can more easily be obtained while the road is in receivership and the attention of the public is focused on this catastrophe than when the road is reorganized and the former security holders have largely been forced to sacrifice their holdings.

"There are other objections to the reorganization plan which may well be modified in the course of time. We, therefore, reiterate our view that securities should not be deposited."

(*Continued on page 252*)

Annual Report

The Cleveland, Cincinnati, Chicago & St. Louis Railway Company —Thirty-Sixth Annual Report

To the Stockholders of

THE CLEVELAND, CINCINNATI, CHICAGO AND ST. LOUIS RAILWAY COMPANY:

The Board of Directors herewith submits its report for the year ended December 31, 1924, with statements showing the income account and the financial condition of the company.

The year's business

During the year 1924 general operating conditions were good and there were no material interferences with the movement of traffic.

The company carried 43,072,973 tons of revenue freight, a decrease compared with 1923 of 1,783,773 tons.

The movement of corn decreased more than 10 per cent as the result of unfavorable growing weather. The lessened production of corn accounts in part for the decreased movement of cattle. On the other hand, the shortage of the corn crop and high prices of other feed led to an increase in the movement of hogs, large shipments having been made in the fall of 1924 which would normally have moved in the following year. The use of the motor truck for short haul markets had an unfavorable effect upon the movement of live stock.

While decreased consumption by steel and iron plants was partly responsible for the substantial decrease of 1,193,286 tons in the bituminous coal carried, it was more largely due to previous over production and to unfavorable conditions affecting the union mines in the fields tributary to the company's road.

A marked falling off in tie shipments is the result of creosoting which prolongs the life of ties with a resulting decrease in the number used.

The lighter demand for lumber reduced the 1924 traffic as compared with the previous year by 304,055 tons.

Lessened activity in the iron and steel industries is responsible for a falling off in pig iron shipments and of rails and fastenings.

Decreased demand for agricultural implements and for automobiles is shown in the lighter 1924 tonnage.

The extensive road building programs which were being executed during the year throughout the territory served by the company's lines explain an increased tonnage of cement, sand and gravel. For the same reason and also because of increased demands from the southwestern oil fields there was an increase in iron pipe shipments.

The company carried 5,550,660 revenue passengers, a decrease of 1,010,931 due to lessened business activity and to the competition of the motor bus and private automobile.

INCOME ACCOUNT FOR THE YEAR

	Year ended Dec. 31, 1924 2,398.01 *miles operated*	Year ended Dec. 31, 1923 2,407.90 *miles operated*	Increase or decrease 9.89 *miles*
Operating Income			
Railway operations			
Railway operating revenues	$87.712.381.47	$94,941,444.28	—$7,229,062.81
Railway operating expenses	66,740,727.85	72,114,740.94	—5,374,013.09
Net revenue from railway operations	$20,971,653.62	$22,826,703.34	—$1,855,049.72
Percentage of expenses to revenues	(76.09)	(75.96)	(.13)
Railway tax accruals	$4,906,836.68	$5,124,227.11	—$217,390.43
Uncollectible railway revenues	14,850.92	13,206.10	1,644.82
Railway operating income	$16,049,966.02	$17,689,270.13	—$1,639,304.11
Equipment rents, net debit	$1,112,206.36	$269,865.79	$842,340.57
Joint facility rents, net debit	573,492.37	727,503.06	—154,010.69
Net railway operating income	$14,364,267.29	$16,691,901.28	—$2,327,633.99
Miscellaneous Operations			
Revenues	$26,247.51	$29,512.99	—$3,265.48
Expenses and taxes	22,181.82	22,175.23	6.59
Miscellaneous operating income	$4,065.69	$7,337.76	—$3,272.07
Total operating income	$14,368,332.98	$16,699,239.04	—$2,330,906.06
Non-operating Income			
Income from lease of road	.....	$220,768.92	—$220,768.92
Miscellaneous rent income	$275,431.73	168,616.01	106,815.72
Miscellaneous non-operating physical property	185,138.94	196,432.50	—11,293.56
Dividend income	195,413.40	484,553.90	—289,140.50
Income from funded securities	443,649.80	403,757.52	39,892.28
Income from unfunded securities and accounts	319,647.92	319,701.69	—53.77
Release of premiums on funded debt	759.57	1,100.04	—340.47
Miscellaneous income	57,352.27	805,428.73	—748,076.46
Total non-operating income	$1,477,393.63	$2,600,359.31	—$1,122,965.68
Gross income	$15,845,726.61	$19,299,598.35	—$3,453,871.74
Deductions from Gross Income			
Rent for leased roads	$150,299.08	$134,458.16	$15,840.92
Miscellaneous rents	224,804.09	262,779.42	—37,975.33
Miscellaneous tax accruals	22,200.00	18,302.87	3,897.13
Separately operated properties —loss	21,055.02	39,867.57	—18,812.55
Interest on funded debt	7,073,343.08	6,729,744.25	343,598.83
Interest on unfunded debt	16,369.68	267,812.84	—251,443.16
Amortization of discount on funded debt	234,391.52	206,551.04	27,840.48
Maintenance of investment organization	778.47	311.20	467.27
Miscellaneous income charges	21,553.92	22,416.67	—862.75
Total deductions from gross income	$7,764,794.86	$7,682,244.02	$82,550.84
Net income	$8,080,931.75	$11,617,354.33	—$3,536,422.58
Disposition of Net Income			
Dividends declared:			
On preferred stock, 5 per cent each year	$499,925.00	$499,925.00	.....
On common stock, 5 per cent in 1924, 4 per cent in 1923	2,351,435.00	1,881,148.00	$470,287.00
Sinking funds	43,218.22	41,169.02	2,049.20
Total appropriations of income	$2,894,578.22	$2,422,242.02	$472,336.20
Surplus for the year carried to profit and loss	$5,186,353.53	$9,195,112.31	—$4,008,758.78

PROFIT AND LOSS ACCOUNT

Balance to credit of profit and loss, December 31, 1923		$32,471,428.60
Additions:		
Surplus for the year 1924	$5,186,353.53	
Accumulated unrefundable overcharges	64,790.42	
Profit on sale of land	47,339.74	
Reacquirement of securities below par	16,378.80	
		5,314,862.49
		$37,786,291.09
Deductions:		
Amount expended for acquisition and retirement of Central Indiana Railway Co. First Mortgage Bonds	$750,000.00	
Surplus appropriated for investment in physical property	34,884.33	
Depreciation prior to July 1, 1907, on equipment retired during year	185,006.01	
Road property retired and not replaced	188,668.04	
Adjustment of sundry accounts (net)	67,852.76	
		1,226,411.14
Balance to credit of profit and loss, December 31, 1924		$36,559,879.95

Operating revenues

The total operating revenues were $87,712,381.47, a decrease of $7,229,062.81.

Freight revenue was $64,101,391.23, a decrease of $5,294,456.05. Of the total decrease of 1,783,773 tons in revenue freight, 1,193,286 tons was bituminous coal, or 66.89 per cent.

Passenger revenue was $16,554,571.71, a decrease of $1,337,383.01. The decrease in revenue passengers carried of 1,010,931 is divided 54,260, interline, 437,439 local and 519,232 commutation.

Mail revenue was $1,811,634.75, an increase of $124,036.17 due to increased emergency, storage mail car, and regular service.

Express revenue was $1,838,662.02, a decrease of $167,842.57 attributable to falling off in business.

Other transportation and incidental revenues were $3,406,121.76, a decrease of $553,417.35.

Operating expenses

Operating expenses, by groups, were as follows:

Group	Amount	Decrease
Maintenance of way and structures	$10,798,262.99	$186,148.96
Maintenance of equipment	19,184,332.79	3,223,391.94
Traffic	1,414,950.18	84,847.34*
Transportation	32,506,228.48	2,052,496.47
Miscellaneous operations	697,483.32	10,245.59*
General	2,333,573.76	106,362.04*
Transportation for investment—credit	194,103.67	113,430.69
Total	$66,740,727.85	$5,374,013.09

*Increase.

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The decrease in expense for maintenance of way and structures is largely attributable to a less extensive rail-laying and ballasting program. Partial offsets are: increased expense due to placing of approximately 32,000 more crossties than in 1923; reconstruction of bridges at Danville and Mackinaw, Illinois, and Covington, Indiana; replacing interlocking plants on St. Louis Division with automatic signals and snow removal during the severe weather of January, February and March, 1924.

The decrease in expense for maintenance of equipment is incident to the unusually comprehensive maintenance program of 1923 and the reduced volume of traffic handled in 1924.

The decrease in transportation expenses is partly accounted for by the reduction in traffic. Fuel, one of the principal items, reflects, in addition to decreased consumption, a lower average price per ton than in 1923. There was a decrease of $505,352.25 in charges for loss and damage to freight, due largely to reduced accruals incident to lighter volume of traffic. Charges for injuries to persons decreased $475,664.10, largely as the result of decrease in crossing accidents.

Railway tax accruals

Railway tax accruals were $4,906,836.68, a decrease of $217,390.43. Accruals for federal income tax decreased $463,728, partially offset by increase in real estate taxes occasioned by higher assessments and higher rates and by acquisition of additional property.

Equipment and joint facility rents

The net debit to equipment rents increased $842,340.57, of which $833,815.68 was in the interchange of freight cars. While there was a decrease in the number of foreign cars on the company's road during 1924, there was a greater proportionate decrease in the number of its own cars on foreign roads, this being due in part to lessened use on other roads of the company's coal cars, many of which were idle as the result of reduced tonnage of coal from the union mines on the company's lines, and also to reduced daily average freight car ownership in 1924 resulting from the fact that heavy retirements of freight cars were made in the latter part of 1923 and in the early part of 1924, while the greater part of the additional equipment acquired in 1924 was received toward the end of the year. Separate tables setting forth the details of equipment and joint facility rents will be found in other parts of this report.

Non-operating income

Total non-operating income was $1,477,393.63, a decrease of $1,122,965.68.

The decrease of $220,768.92 in income from lease of road is due to the inclusion in this account in 1923 of an adjustment in connection with final settlement with the United States Railroad Administration for the federal control period.

The increase of $106,815.72 in miscellaneous rent income is due to the crediting to this account in 1924 of a class of items which were credited to rents of buildings and other property, an operating revenue item, in 1923.

The decrease of $289,140.50 in dividend income is largely accounted for by the inclusion in 1923 of a dividend of $200,000 on stock of the Indianapolis Union Railway Company (declared from surplus income for the period May 31, 1915, to December 31, 1922), against none in 1924.

The increase of $39,892.28 in income from funded securities is due to accrual of interest on an increase in investments, principally advances to subsidiaries.

The decrease of $748,076.46 in miscellaneous income is principally the result of the inclusion in this account in 1923 of an adjustment in connection with final settlement with the United States Government for the guaranty period, March-August, 1920.

Net corporate income

After charges for dividends aggregating $2,851,360 and other appropriations amounting to $43,218.22, there remained a surplus of $5,186,353.53 which was carried to the credit of profit and loss.

Property investment accounts

Increases in the property investment accounts for the year, were as follows:

Road	$3,467,412.96
Equipment	16,049,297.99
Miscellaneous physical property	214,222.82
Improvements on leased railway property	136,036.65
Total	$19,866,970.42

Appreciative acknowledgment is made to officers and employees of their loyal and efficient co-operation and service.

For the Board of Directors,
PATRICK E. CROWLEY,
President.

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Railway Financial News

(*Continued from page* 250)

KANSAS CITY NORTHWESTERN.—*Loan Denied.*—The Interstate Commerce Commission in a decision rendered by the commission itself has affirmed its original report, 94 I. C. C. 531, denying this carrier a loan under section 210 of the transportation act.

LOS ANGELES JUNCTION.—*Acquisition.*—This company has applied to the Interstate Commerce Commission for authority to acquire control by lease of a line owned by the Central Manufacturing District of Los Angeles.

MANISTEE & NORTH-EASTERN.—*Wabash Interested.*—J. E. Taussig, president of the Wabash, is reported to have said that the Wabash, which now controls the Ann Arbor, is considering the purchase of the Manistee & North-Eastern, which extends from Manistee, Mich., northeast to Grayling with a branch to Traverse City and connects with the Ann Arbor at two points.

MEMPHIS UNION STATION COMPANY.—*Final Valuation.*—The Interstate Commerce Commission has issued a final valuation report as of 1916 finding the final value for rate-making purposes of the property owned and used for common-carrier purposes to be $2,259,000.

MUSCLE SHOALS, BIRMINGHAM & PENSACOLA.—*Stock.*—This company has applied to the Interstate Commerce Commission for authority to issue $2,500,000 of common stock to be used in acquiring the property of the company at foreclosure sale.

NORWOOD & ST. LAWRENCE.—*Final Valuation.*—The Interstate Commerce Commission has issued a final valuation report as of 1917 finding the final value for rate-making purposes of the property owned and used for common-carrier purposes to be $533,078.

SEABOARD AIR LINE.—*Loan.*—S. Davies Warfield, president of the Seaboard Air Line, has confirmed reports that negotiations are pending with Dillon Read & Co., New York, for the sale of $25,000,000 6 per cent ten-year first mortgage bonds. Mr. Warfield in a statement said:

"The proposed new issue will provide for the extension of the main coast to coast line from West Palm Beach to Miami and other important east coast points, and also the extension of the Seaboard's main line system through subsidiary lines to Fort Myers and other important west coast points south and east. Two hundred and seventeen miles of new construction, 468 miles total mileage are involved, including the Florida, Western & Northern. Through the extension the Seaboard will be in a position to take care of the very heavy increase in its business, both freight and passenger. The vigorous public demand made by east coast points and southern Florida, generally for the extension of the Seaboard's Florida lines, could not be ignored and the development was believed in line with the Seaboard's public policy."

SOUTHERN PACIFIC.—*Purchases Interurban Line.*—The Southern Pacific has arranged for the purchase of the Central California Traction Company, an electric line operating freight and passenger service between Sacramento, Cal., and Stockton, a distance of 53 miles. The traction company connects with the Southern Pacific line between San Francisco and Los Angeles at Stockton, and with the San Francisco-Ogden line at Sacramento. Application will be made to the Interstate Commerce Commission for permission to conclude the sale.

TEXAS STATE.—*Tentative Valuation.*—The Interstate Commerce Commission has served a tentative valuation report placing the final value for rate-making purposes of the property owned and used at $603,202.

Dividends Declared

Buffalo, Rochester & Pittsburgh.—Common, $2; preferred, $3, semi-annually; both payable August 15 to holders of record August 8.

Trend of Railway Stock and Bond Prices

	July 28	Last Week	Last Year
Average price of 20 representative railway stocks	83.02	81.65	71.54
Average price of 20 representative railway bonds	90.54	90.39	89.03

Railway Officers

Executive

The offices of vice-president and general manager, general traffic manager, general superintendent and auditor of the Dansville & Mount Morris have been abolished and the duties assumed by **E. M. Harter**, managing receiver, with headquarters at Dansville, N. Y.

George D. Dixon, vice-president in charge of traffic of the Pennsylvania has, on account of ill health, requested that he be assigned to less strenuous duties. He has accordingly been appointed assistant to the president. Mr. Dixon was born on March 28, 1857, at Philadelphia, Pa., and entered railway service on December 18, 1883, in the claim bureau of the general freight department of the Pennsylvania, since which he has been consecutively to 1899, clerk in the rate department, chief rate clerk and division freight agent at Baltimore, Md. From May, 1899, to June, 1903, he was assistant general freight agent at Philadelphia, Pa., and from June, 1903, to May, 1912, he was freight traffic manager. At this time he became vice-president in charge of traffic which position he held at the time of his recent appointment to assistant to the president.

George D. Dixon

Operating

J. E. Slater, assistant to the general manager of the New York, New Haven & Hartford, has accepted the chair of transportation at the University of Illinois, Urbana, Ill.

Charles J. Connett, who has been promoted to superintendent of the Omaha division of the Chicago, Burlington & Quincy, with headquarters at Omaha, Neb., entered railway service in July, 1895, as a call boy on the Chicago, Burlington & Quincy. He was later successively promoted to telegraph operator, train dispatcher and chief dispatcher. Mr. Connett was later promoted to trainmaster, and he held that position until October, 1922, when he was promoted to assistant division superintendent at St. Paul, Minn., where he remained until his recent promotion to superintendent of the Omaha division.

H. E. Whittenberger, general manager of the Grand Trunk Western, with headquarters at Detroit, Mich., has retired from active service and has been succeeded by **C. G. Bowker**, heretofore general manager of the Central region of the Canadian National, with headquarters at Toronto. **A. E. Warren**, general manager of the Western region of the Canadian National, with headquarters at Winnipeg, has succeeded Mr. Bowker at Toronto, and **W. A. Kingsland**, assistant general manager of the Central region, has been promoted to general manager of the Western region, succeeding Mr. Warren.

Traffic

N. Kinell, general passenger agent of the Southern Pacific, with headquarters at El Paso, Tex., has been transferred to San Francisco, Cal., succeeding **F. C. Lathrop**, promoted.

G. C. Ross, assistant general freight and passenger agent of the Duluth, Missabe & Northern, with headquarters at Duluth, Minn., has been promoted to traffic manager with the same headquarters.

H. E. Woodworth has been appointed general agent of the Missouri Pacific, the International-Great Northern and the Gulf Coast Lines of Louisville, Ky., in charge of a newly established agency.

J. B. Large, freight traffic manager of the Eastern region of the Pennsylvania, with headquarters at Philadelphia, Pa., has succeeded C. B. Sudborough as assistant general traffic manager. Mr. Large was born on August 18, 1882, at Philadelphia, Pa., and was educated in the Protestant Episcopal Academy of Philadelphia, and spent one year at the Wharton School of Finance of the University of Pennsylvania. He entered the service of the Pennsylvania as a clerk at Germantown Junction on October 7, 1902, and the following year was transferred to the rate room in the general office at Philadelphia. From 1906 to 1916 Mr. Large held various positions in the freight department and on October 15, 1917, he was appointed assistant general freight agent of the Lines East of Pittsburgh and Erie. The following month he was advanced to general freight agent, and when the government returned the railroads to their owners in March, 1920, he was appointed freight traffic manager of the Eastern region, with headquarters at Philadelphia, Pennsylvania, which position he held at the time of his recent appointment.

J. B. Large

F. C. Lathrop, who has been promoted to assistant passenger traffic manager of the Southern Pacific, with headquarters at San Francisco, Cal., was born on April 26, 1872, at Michigan City, Ind., and entered railway service in 1896 in the traffic department of the Wilmington Transportation Company. He was later promoted successively to city ticket agent and traveling passenger agent, resigning in 1901 to become a paymaster on construction work on the Mexican Central in Mexico. Mr. Lathrop entered the service of the Southern Pacific in February, 1903, as city passenger agent at Los Angeles, Cal. In May, 1905, he was promoted to traveling passenger agent and in October, 1909, to commercial agent at Pasadena, Cal. He was promoted to district passenger agent at Los Angeles, in May, 1911, and in July of the following year was promoted to assistant general passenger agent at San Francisco. Mr. Lathrop held that position until December, 1923, when he was promoted to general passenger agent, in which position he remained until his recent promotion to assistant passenger traffic manager.

F. C. Lathrop

C. B. Sudborough, assistant general traffic manager of the Pennsylvania, has been appointed general traffic manager, succeeding Mr. Eysmans. A sketch of Mr. Sudborough's railroad career appeared in the *Railway Age* of January 17, 1925.

J. L. Eysmans, general traffic manager of the Pennsylvania, has been elected vice-president in charge of traffic to succeed Mr. Dixon, promoted. A photograph and sketch of Mr. Eysmans' railroad career appeared in the *Railway Age* of January 24, 1925.

W. E. Allison, assistant general agent mail, baggage and milk traffic of the Canadian Pacific, has been promoted to general agent in charge of mail, baggage and milk traffic, succeeding J. O. Apps, who has been appointed executive assistant to the president.

C. J. Nelson, general agent of the Chicago, Burlington & Quincy, with headquarters at Herrin, Ill., has been promoted to general agent coal department, with headquarters at Chicago, a newly created position. **A. G. Vogel** has been appointed general agent at Herrin, succeeding Mr. Nelson.

C. T. Mackenson, Jr., general freight agent of the Pennsylvania, with headquarters at Pittsburgh, Pa., has been promoted to Freight traffic manager at Philadelphia, succeeding J. B. Large, promoted. **H. C. Oliver,** division freight agent at Toledo, Ohio, has been promoted to general freight agent to succeed Mr. Mackenson. **Guy S. McCabe,** general freight agent at Philadelphia, has been appointed assistant to the traffic manager at Pittsburgh. **Alfred J. Ball,** foreign freight agent, has succeeded Mr. McCabe as general freight agent at Philadelphia, and **E. S. Neilson,** division freight agent at Baltimore, has succeeded Mr. Ball as foreign freight agent at Philadelphia. **W. R. Cox,** assistant general freight agent at Pittsburgh, has been appointed coal and ore agent, a newly created position, with headquarters at Cleveland, Ohio. **W. McL. Pomeroy,** division freight agent at Buffalo, N. Y., has succeeded Mr. Cox as assistant general freight agent at Pittsburgh.

A. B. Cutts, passenger traffic manager of the Minneapolis & St. Louis, with headquarters at Minneapolis, Minn., has retired after 41 years of railway service. He was born on October 23, 1866, at Lillington, N. C., and was educated at the Middle Georgia Military College. He entered railway service in 1884 as a clerk in the ticket and auditing department of the Chicago & Alton and was appointed chief rate clerk in the auditor's office of the Chicago, St. Paul, Minneapolis & Omaha in 1887. Mr. Cutts was employed in a similar capacity on the Great Northern in 1890, and two years later entered the service of the Minneapolis & St. Louis as chief clerk in the general ticket and passenger department. He was promoted to general passenger and ticket agent in January, 1894, and his jurisdiction was extended over the Iowa Central in May, 1902. He was appointed assistant general passenger agent of the Chicago & Alton, and the Toledo, St. Louis & Western in December, 1909, returning to the Minneapolis & St. Louis in November of the following year as assistant traffic manager. On January 1, 1918, Mr. Cutts was promoted to general passenger agent and he held that position until March, 1920, when he was promoted to passenger traffic manager. He continued in that capacity until his retirement as noted above.

Mechanical

W. P. Lambert has been appointed special assistant of the Central of New Jersey, with duties to be assigned by the superintendent of motive power and equipment.

Engineering, Maintenance of Way and Signaling

C. Stephens, signal engineer of the Chesapeake & Ohio, with headquarters at Richmond, Va., has resigned.

D. A. Kuebler, roadmaster on the Kansas City Southern, with headquarters at Shreveport, La., has been promoted to office engineer, with headquarters at Kansas City, Mo., succeeding **R. E. Van Atta,** promoted to engineering assistant to the vice-president and general manager.

F. H. Cook has been appointed division engineer of the Texas division of the Gulf Coast Lines, with headquarters at Kingsville, Tex., a newly created position. **T. C. McCord** has been appointed division engineer of the San Antonio division of the International-Great Northern, with headquarters at San Antonio, Tex., succeeding **C. O. Hooper,** who has resigned.

Purchasing and Stores

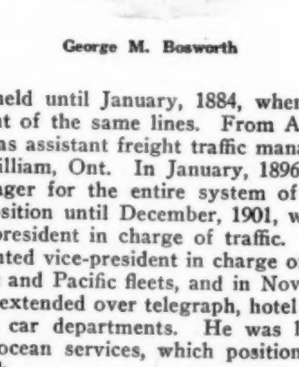
E. Harty, district storekeeper of the Southern Pacific, with headquarters at Sacramento, Cal., has been promoted to assistant general storekeeper, with headquarters at San Francisco, a newly created position. **E. H. Polk,** district storekeeper, with headquarters at West Oakland, Cal., has been transferred to Sacramento in place of Mr. Harty. **H. W. Concannon,** division storekeeper, with headquarters at Ogden, Utah, has been promoted to district storekeeper at West Oakland, succeeding Mr. Polk. **J. F. Brown,** division storekeeper, with headquarters at Bakersfield, Cal., has been transferred to Ogden in place of Mr. Concannon. **F. L. Doss,** division storekeeper, with headquarters at Dunsmuir, Cal., has been transferred to Bakersfield, Cal., succeeding Mr. Brown.

Obituary

W. D. Stokes, assistant general storekeeper of the Illinois Central, with headquarters at Memphis, Tenn., died at Jackson, Miss., on July 20.

William Patton, superintendent of signals for the southwestern Ontario section of the Canadian National, died suddenly in Toronto last week while under an anaesthetic when having a fracture set at a local hospital following an automobile accident.

George M. Bosworth, chairman of the Canadian Pacific Steamship Lines, died in London, England, on July 27. Mr. Bosworth was born on January 27, 1858, at Ogdensburg, N. Y. He entered railway service on May 1, 1875, as an office boy with the Ogdensburg & Lake Champlain, and was successively to 1881, clerk in the local freight office, clerk in the audit office and clerk in the general freight office. From February to August, 1881, he was general freight agent for the same road, and from August, 1881, to May, 1882, traveling freight agent of the National Dispatch Line at Chicago. At this time he became assistant general freight agent of the Ontario and Quebec lines of the Canadian Pacific, which position he held until January, 1884, when he became general freight agent of the same lines. From April, 1885, to January, 1886, he was assistant freight traffic manager of the lines east of Fort William, Ont. In January, 1896, he became freight traffic manager for the entire system of the same road, and held this position until December, 1901, when he was elected fourth vice-president in charge of traffic. On June 17, 1910, he was appointed vice-president in charge of all traffic, including the Atlantic and Pacific fleets, and in November, 1911, his jurisdiction was extended over telegraph, hotel and sleeping, dining and parlor car departments. He was later appointed chairman of the ocean services, which position he held at the time of his death.



George M. Bosworth